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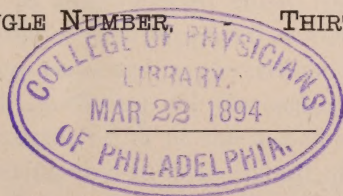
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EDITOR AND PROPRIETOR.

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Original Communications.

ART. I.—Dermoids—Their Development, Character, and How to Dispose of Them.*

By JOSEPH PRICE, M. D., of Philadelphia, Pa.

SURGEON-IN-CHARGE PRESTON RETREAT; HONORARY FELLOW MEDICAL SOCIETY OF VIRGINIA, ETC.

I have made this choice of tumors because the complications are about always present—sometimes simple, but commonly extensive and aggravated. Commonly there are very general adhesions to all surrounding structures or viscera, requiring cautious, painstaking surgery. They are commonly small; their contents mixed and filthy. Occasionally fluid occurs in considerable quantities. They have a marked tendency to suppuration and inflammatory action; and in dealing with them there is needed a prolonged experience with suppurative forms of pelvic disease. Many of these cases are neglected, or go unrecognized until the patient, suffering all the sequelæ of the retrograde changes, demands relief at the hands of some specialist.

In considering this subject, I shall quote freely from that

*Read before Philadelphia Obstetrical Society, February, 1893.

eminent pathologist, Mr. Bland Sutton, primarily for the reason that my own observations—the deductions of not a few experiences—are confirmed by his clear, concise, logical discussion of the subject. He has done much to help us out of our ignorance and confusion upon the subject of dermoids. He has gone very far in settling for us their origin, the puzzling question of their pathology, the causes of development, their size, contents, etc. He says:

“The cysts which arise in connection with the ovary and parovarium may be conveniently arranged in three groups, according to the region in which they arise:

“(1) Oöphoron, unilocular cysts, multilocular cysts, cystic corporea lutea, dermoids.

“(2) Paroöphoron, papillary (proliferous) cysts.

“(3) Parovarium, parovarian cysts, pedunculated cysts hanging from the broad ligament.

“My first efforts were directed toward ascertaining the relation of dermoids to these three regions of the ovary. In all the examples of ovarian dermoids dissected for the purpose, it was easy to demonstrate that the parovarium was unconnected with them, but in several cases this structure differed in minor particulars from the usual arrangement of the tubules. Another interesting fact was the frequent association of malformation of the Fallopian tube with dermoids. In some cases there was an accessory abdominal ostium; in others the tube would have no abdominal opening whatever.

“These conditions have but little bearing on the pathology of ovarian dermoids, for they seem to be quite as frequently associated with other forms of ovarian cystomata. It now became necessary, seeing that ovarian dermoids have no connection with the parovarium, to ascertain, as far as possible, to which district of the ovary they belong. When a cyst attains a large size, this task is an impossible one, but in dermoids of the size of a walnut, and sometimes when they are as large as an orange, it is easy to show that they originate in the oöphoron, and a series of observations carried out for this purpose has had the result of convincing me that ovarian dermoids arise in the same portion of the ovary as multilocular cystic tumors. These cysts arise in the Graafian follicles, and it is my intention to proceed to show that ovarian dermoids also arise in these follicles. Having localized the situation of ovarian dermoids to the

oöphoron, the task became simple but laborious, for it involved a large amount of histological work.

"When an ordinary oöphoritic cyst is compared with a typical dermoid the difference is very striking. In the simple non-dermoid ovarian cyst we find the interior lined by a single layer of flattened epithelium, and this may be difficult of detection. The dermoid, on the other hand, may present skin, hair, sweat and sebaceous glands, teeth and even a mamma.

"Should the non-dermoid ovarian cyst be multilocular, the individual cavities may, if not too large, present a membrana granulosa; in the dermoid the loculi are lined with skin, furnished with hair, etc.

"It may also be mentioned, as tending to show the close connection between ovarian glandular cysts and dermoids, that it is no unusual thing to find mucous cysts in the smaller loculi in the walls of dermoids. We must now proceed to consider the simplest form of an ovarian dermoid.

"If a cyst in the ovary presents the smallest piece of skin, furnished, perhaps, with only two or three hairs, its dermoid character is established. The presence of a tooth without any skin is sufficient. As a matter of fact, every gradation may be traced from the membrana granulosa of an ovarian follicle to the glandular cutaneous lining of a dermoid. In some specimens the epithelial investment is indistinguishable from that lining a unilocular cyst. Yet in one small portion of the cyst wall a few hairs on a patch of skin place it in the category of dermoids.

"Thus far we know that ovarian dermoids resemble non-dermoid ovarian cysts in that they usually consist of one large cyst surrounded by numerous smaller ones. We have already seen that a multilocular cyst of the ovary may present only one tiny patch of dermoid tissue, though the tumor is composed of a multitude of cavities, great and small. There are good grounds for the belief that if all multilocular ovarian tumors were systematically examined, patches of dermoid tissue in the cyst would be found to occur with very great frequency. Lastly, an ovarian dermoid may be multilocular, all its cavities presenting skin, hair, or teeth, or all three structures in the same cyst.

"Thus in the general disposition of the cavities—single, multiple, and mixed—dermoids and non-dermoid ovarian cystomata are in agreement. The most highly organized ovarian dermoids are those which contain a well-developed mammary gland capable of secreting a fluid resembling milk.

"In order to obtain teeth in a cyst lined with mucous membrane, we need calcify some of the cellular projections, and a dermoid is the result. Calcific patches and cartilage are not peculiar to dermoids; they have been seen in non-dermoid ovarian cysts. Finally, although there are striking differences between ovarian cysts and complex dermoids, nevertheless, the difference between a complex ovarian cyst and a simple dermoid is practically *nil*, and, as a matter of fact, the glandular ovarian cysts are often structurally more complex than many dermoids, and I see no escape from the conclusion that *ovarian dermoids, like oöphoritic cysts in general, originate in Graafian follicles.*

"It must be borne in mind that a distinction exists between dermoids occurring in such situations as the angle of the orbit, tongue, neck, etc., and ovarian dermoids."

The subject is one that needs all the light that can be thrown upon it; so we will endeavor to collate the best of modern authority—the result of the investigations of those who have given the subject the most careful and searching study.

Pozzi, in his great work on *Gynecology*, states (vol. ii, p. 100): "Mixed tumors, as well as dermoid cysts, often ossify; but a study of their structure emphasizes the interesting fact that the fragments of bone are not necessarily situated near the dermoid cyst, but may, indeed, be quite independent of them."

In the "Bibliography and Notes" appended to this chapter, he says (p. 121): "The frequency with which purely dermoid cysts are met in certain parts of the head and neck is well known; on the other hand, the complex tumors called teratomata are often met with at other points (sacral region, anterior mediastinum, palatine arch.)"

On the same page many interesting facts are noted, among them being that "Velitz, of Budapest, * * * reports a curious case of dermoid with a mamma. Woman of 40 years, who had borne twelve children. Ovariectomy was performed for a dermoid cyst containing oily matter mixed with white hairs; upon the internal wall was found a sort of mamma as large as a child's fist; a little milk resembling colostrum was squeezed out from the nipple. The areola was pink, and surrounded by a circle of hairs."

Also, "In the Museum of Clinical Gynecology at Halle, there is a piece of a dermoid cyst taken from a goose, and containing several feathers."

Again, after noting that Baumgarten reported a case where the cyst contained a body resembling an eye, etc., it is noted that "the finding of retinal epithelium has already been reported by Marchand."

In this connection, reference may be made to the queer dermoid in the ovary removed by Dr. Hunter McGuire (reported by his son, Dr. Stuart McGuire, *Va. Med. Monthly*, June, 1892.) The cyst (besides two gallons bad-smelling fluid resembling pus, and large mass of hair) had growing from its inner surface a well-formed penis—1 $\frac{3}{4}$ inch long, and $\frac{3}{4}$ inch in diameter—with hair surrounding its base, a pair of testicles in relatively proper position; and just beneath them were three large teeth—an incisor and two bicuspid—firmly imbedded in a well-shaped gum.

Turning back to the text, pages 96–102 inclusively, same volume of Pozzi's work, the following quotation is full of interest. *Referring to dermoids*:

"They are usually small, but they may become voluminous by uniting with proligerous cysts, or even in consequence of acute inflammatory attacks which suddenly increase their fluid contents. Though they may be long unrecognized, and perhaps revealed only by chance at the autopsy, as they begin to enlarge, they approach—from a clinical point of view—the ordinary proligerous cysts that I have just described. Poupinel (*Thèse de Paris*, 1886) has gathered data in regard to forty-four cases where both ovaries were transformed into dermoid cysts."

"They are much less frequent than proligerous cysts. Olshausen collected statistics of 2275 cases, coming from a series of ovariectomies performed by Spencer Wells, Keith, Schröder, Krassowski, A. Martin, Billroth, C. v. Braun, Esmarch, Dohen and himself. Out of this number there were only eighty dermoid cysts (3.5 per cent.) Their internal surface is covered with a membrane which looks like the skin, and which has a similar structure; we may see on it a corneous layer formed of several layers of flat and thin spheroidal cells, like those of the rete Malpighii.

"A panniculus adiposus separates the dermic layer from the fibrous capsule of the cyst. Upon the surface of the derma are papillæ which may look like nipples, and some hairs which are inserted into hair follicles occasionally provided with a sebaceous gland; the latter were first demon-

strated by Friedlander. Sudoriparous glands are also found. The hairs, whether free or implanted, are long, tawny, agglutinated together by sebaceous matter, and sometimes rolled into little balls. Sebum, resembling the vernix caseosa, partly fills the cavity, and often forms small isolated masses; it is sometimes oily in consistency, and contains many epithelial cells, cholesterin crystals, and fatty acids. Teeth and bones have been found in these cysts; bones are inserted in the wall, and more or less covered by the dermic layer; they are irregular in shape, usually flat, and formed of compact tissue; cartilage is present in small patches, which, according to Labbé and Verneuil, sometimes articulate by means of intervening fibrous bundles.

"The teeth project into the cavity, and are often loosely inserted into alveoli formed of bony debris. They are never perfect in shape, and cannot be absolutely identified as incisors, canines or molars; the cement is usually absent. Hollaender makes the interesting statement that the teeth are always placed with crowns sloping towards the median plane of the body, so that an examination of the cyst cavity will always determine the side of the body upon which it originated. As many as a hundred teeth have been found in one cyst (Schnabel). Autenrieth describes a case where 300 teeth were taken out of a cyst which contained even more. Some writers claim to have found carious teeth, but, as Lannelongue observes, Magitot is probably correct in thinking that this is not really caries, but a phenomenon of wear and absorption. P. Ruge found in a dermoid cyst, just below a bone which resembled the inferior maxillary with its molar teeth, a small mass which in form, size and acinous structure had every appearance of a submaxillary gland.

"Unstriped muscle fibres have been found in the dermic layer (Virchow); as to the striated fibres, Olshausen denies their existence, saying that where they are found the case is probably one of teratomata instead of dermoid cyst. In truth, many authorities confuse the two.

Cruveilhier quotes a case where nails were found; Baumgarten reports a most remarkable case where the cyst, besides skin, hairs, and teeth, contained a body which resembled an eye, with a species of convex cornea and epithelium like that of the retina. There was also a mucous membrane similar to that of the intestines and stomach, and encephaloid nerve substance.

"The presence of gray matter in dermoid cysts is a knotty

point. In one case Virchow found gray matter, laminated as in the cerebellum; Key found some, enclosed in a bony cavity; Rokitansky, in a species of capsule near a bone; other pathologists have, in exceptional cases, found nerve filaments supplying the teeth.

Besides these solid substances, dermoid cysts contain a milky fluid, in which are often cholesterin crystals.

Mixed tumors, formed by a combination of dermoid with other forms of ovarian cysts, have long been known (Lébert, 1857). The subject has recently been studied by Poupinel (*Thèse de Paris*, 1886), who states that in one and the same tumor we may find in closest union dermoid cysts and cysts with pavement epithelium, cubical, ciliated, goblet, polymorphous cells, etc. More than this, in the same cystic cavity we may find the epidermis with its appendages (hairs, sebaceous and sudoriparous glands), and a lining of uniform or polymorphous epithelium. Finally, the interior lining of the cavity may be entirely formed of skin, which may, however, be incomplete. In some instances the cutaneous lining is found in a few places only of the dermoid cavity, and may be in the form of large papillæ, into which are implanted the hairs. The rest of the cyst wall is smooth and fibrous, or else looks more mucous than cutaneous."

It is to be regretted that thorough histological examinations of so-called dermoid tumors are rare.

Were they more frequent, it is probable that many cases of so-called dermoid cysts would be classed with mixed tumors. The fibrous stroma is usually formed of young connective tissue, of adult or of myxomatous tissue. Yet, besides teeth, which are produced from the ectoderm, and are met with only when there is a cutaneous lining, we find cartilaginous and bony tissue in the fibrous walls of mixed tumors. It may also be seen in tumors which possess no dermoid characteristics. Poupinel reports an example of a mucoid cyst of the ovary, followed by the appearance of cysts of the same nature all over the body; cartilaginous nodules were found in its walls. * * * * *

"Both ovaries may be simultaneously affected. In that case, as in the case of unilateral ovarian tumors, combinations of every variety of cyst may occur. Every ovary may contain an epithelial mucoid tumor, with polymorphous epithelium or epithelium of one kind alone. For instance, both cysts may be lined with ciliated epithelium (Bro-

dowski, etc). Oftentimes both ovaries are transformed into mixed tumors (Flesch, Neuman, Poupinel)."

"There may be a dermoid cyst upon one side and a mucoid cyst upon the other (Lebert, Young, Herchl, Mugge, etc.), or a mucoid cyst on one side and a mixed tumor on the other (Poupinel). The question of *origin* of dermoid cysts is one of the most obscure points in general pathology. The theory which ascribes them to *extra-uterine pregnancy* scarcely deserves mention, since they are often met with in children. The theory of *diplogenesis* by fetal inclusion is also inadmissible, and is at once disproved by the great number of teeth present. The term *plastic heterotopia*, used by Lebert, is no explanation, but merely a name."

"There are a few more tenable theories; that of *parthenogenesis*, which considers their formation due to a proliferation of germinating epithelial cells, is not satisfactory, because it fails to account for the presence of similar growths in other parts of the body where there is no epithelium. The theory of *impaction*, although not beyond criticism, is on the whole the most satisfactory. According to this view, during intra-uterine existence certain portions of the blastoderm become impacted by pressure within the tissues, and develop there later, giving rise to an irregular formation of the normal tissues. Verneuil was the first to formulate this ingenious theory in regard to cysts of the branchial clefts of the neck and head (1883)."

"The demonstrations of His in regard to the axis cord, from which he claims that the genital organs are developed, assist us in understanding the complexity of the elements found in dermoid cysts of the ovary. The organs which are formed by all the layers of the blastoderm are the only ones which take part in the formation of the axis cord. It is impossible by dissection to identify the different germinative layers; we can easily imagine, therefore, that portions of tissue corresponding to the corneous layer, the medullary tube (ciliated epithelium), or the middle layer (muscle, bone), may become misplaced in the ovary as in the testicle. The theory of impaction receives strong corroboration from these researches. Lannelongue adopts it unreservedly. He calls attention, moreover, to the fact that the development of these tissues, foreign to the parts in which they are situated, brings about certain modifications in the structure of the latter, which add to the complexity of the abnormal growth. Perhaps this may explain the union of proliferating ovarian cysts to dermoid cysts, and

the various transitional stages in these neoplasms. Still, Lannelongue does not entirely reject the idea of *diplogensis* in cases where foetal remains are found in cysts, which he terms foetal cysts. He considers them to be combinations of cysts and double monsters—the cause giving rise to the production of the monster being intimately associated with that which determines the formation of the cyst. One or the other may predominate, according to the case; the higher we go in the series, the more does the element of the monstrosity predominate, and the more does the cyst element tend to diminish and disappear. Thus, in the genesis of these tumors, there are two factors to be considered: (1) the production of cystic cavities, and (2) the existence of a centre of supplementary development. To admit the existence of this (secondary) independent centre is to satisfactorily account for the complex character of these neoplasms, but it must be confessed that the admission creates problems quite as difficult of solution as those which it destroys.”

Thomas and Mundé (*Diseases of Women*, pp. 667–670) say: “In various parts of the body, orbit, floor of mouth, brain, eye, anterior mediastinum, lungs, mesentery, testicles, ovaries, peculiar cysts containing fat, teeth, hair, cholesterin, cartilage, bone are sometimes found. Their walls give evidence of the existence of sweat glands, sebaceous follicles, papillæ and an investing epithelium; so that the microscopic appearance of the walls resemble closely that of skin. Many fanciful reasons are advanced as to the origin of these peculiar growths. It is now generally believed that they are the result of an irregular and eccentric development of the tissues of the foetus during intra-uterine life. It was Lebert who advanced the theory that from the elements present, spontaneous generation of a portion of skin occurs, and this being given, we have, as Dr. Farre expresses it, ‘the basis out of which many of these products spring.’

“M. Pigné has analyzed 18 cases with reference to the *period of life* at which they were found, with the following results:

5 existed in virgins under 12 years.

6 existed in children from 6 months to 2 years.

4 existed in the female foetus at term.

3 existed in foetuses cast off at 8 months.

“Dermoids vary in size from a hen’s egg to adult head, rarely larger; are hard and generally globular. One ovary

is usually affected, and by only one tumor, but instances are on record where a single ovary contained several dermoids.

"Out of 15 cases of dermoid cysts operated on by me (Mundé), in three both ovaries were affected in this manner. One of these three women was pregnant at five months; from another, a single woman, 39 years old, I removed a switch of hair $2\frac{1}{2}$ feet long, which, after dissolution of fat contained in it by immersion in ether, lengthened to $5\frac{1}{2}$ feet.

"Innocuous in themselves, not likely to increase rapidly or to attain great development, they sometimes set up very serious and even fatal disturbance by one of three methods: (1) suppuration and consequent abscess; (2) by perforation and discharge into peritonæum; (3) by cyst containing dermoid elements, secreting fluid and changing its character to that of a fluid tumor.

"Out of 150 ovarian tumors removed by me [Mundé] four were large cysts having as bases dermoids containing fat, hair and bone. In these cases the cysts containing the dermoid elements were not in communication with the large cysts filled with fluid colloid, which constituted the mass of the tumor. In two cases the tumor was nearly removed when a cyst filled with fluid, fat, etc., was opened into. The large cysts appeared like ordinary multilocular cysts."

Dermoids are often discovered by accident only. They are often movable, and tend to inflame spontaneously. They produce pain and even elevation of temperature, which leads to their discovery, or their pedicle becomes twisted, or they are bruised accidentally.

Janvrin, of New York, reports a case (*Amer. Jour. Obstet.*, vol. xix, 1886,) in which a bunch of hair protruding from rectum led to the discovery; patient pulled away hair; some years later her abdomen began to swell; two ovarian tumors diagnosed; on removal both proved to be dermoids, one of which had perforated into rectum.

Pelvic abscesses have been proven to owe origin to dermoids by hair, etc., escaping from sinus of supposed abscess into vaginal vault (posterior). They should be removed by laparotomy as soon as discovered. Three chief periods in female life which seem to excite the dormant growth of dermoid tumors of ovary: (1) puberty; (2) marital relations; (3) pregnancy and parturition.

Greig Smith, in his work (p. 114-116), states that about one in ten ovarian tumors is entirely or partially dermoid. Exact origin uncertain. Generally admitted that rudiments of all dermoids exist at birth, and that they remain quiescent indefinitely, or start into active growth at any period from or *before* birth to old age. Dermoid ovarian growths most frequently manifest themselves after puberty.

Dermoid cyst is usually divided by septa into separate portions; and the contents may differ in various loculi. The main cyst often contains a greasy, chocolate-colored fluid, while the others are full of the characteristic sebaceous material. Most striking contents are pieces of true bone, most frequently stunted alveolar processes. Sebaceous follicles in the cyst-wall frequently attain to the dimensions of secondary cysts, and a similar development may take place in the sweat glands.

Malignant tumors have been found growing in dermoid cysts. (Bristol Infirmary; woman 59 years old; suppurating dermoid, in wall of which a solid sarcomatous growth, as large as a hen's egg. No secondary, malignant development in woman as yet). More than one observer has noted that malignant tumors of the abdominal cavity sometimes follow removal of dermoid cysts; no doubt the primary elements existed in the dermoid growths. Both ovaries are liable to be diseased in a larger proportion of cases than in cystoma.

Ordinary glandular cystic disease is found to co-exist with dermoid cysts in a proportion of instances larger than would be likely if it were coincidence. Any causal connection between the two is not likely to be more than a stimulus to development started by increased vascular supply from the one which first began to take on diseased action.

The *outer aspect* of a dermoid cyst is different from that of an ordinary cystoma. The glistening, pearly aspect of the latter is replaced by a muddy or opaque appearance, darker in color, sometimes approaching brown. Adhesions

are common in dermoid cysts, chiefly because they are liable to become inflamed.

Surgery of itself, in all abdominal work, to be successful must be clean, rapid, positive and direct of purpose. There should be no bargaining with chances, nothing begun in doubt, and it should be carried through to a finish with mathematical strictness in every detail. Rapid, deft surgery gives the best results throughout all surgery, special and general; it minimizes the harmful results of exposure and manipulation.

Short anesthesia never waterlogs a patient. I am satisfied that a number of patients die from prolonged anesthesia, and the slow, hesitating and sluggish steps of the operation. Death will rarely follow a short anesthesia and an operation shortened by a deft sweep and dextrous manipulation. We have rapidity of operation as an essential. Those who have had many surgical experiences, whether abdominal, pelvic or general, and have failed to consider time as an important element, have equally failed to carefully study many important phases in their surgical experiences and note the causes of their varying results. The rationale of this must be plain to all. We have this one undisputed truth amid the many confusions which the strong light of modern surgery has not yet driven out.

During these surgical procedures you cannot enjoy the delights of the aroma of a Wheeling stogie while you discuss a glass of Kentucky best and the advantages of the annexation of the Sandwich Islands. There should be the very perfection of cleanliness before, during and after operation, extending to every detail and appliance, and combined with the utmost simplicity of method.

I would not place special stress upon any particular period of treatment; each and all should be regarded as having a peculiar importance—the one preliminary to, the one during, and that subsequent to, operation. So interwoven—interdependent—are the requirements of each that it would be difficult to give to one a distinctive importance over the other.

From the moment the patient comes under the surgeon's hands there begins that thoughtful, deliberate, skillful treatment, that conscientious exercise of sound surgical judgment, that attention to every phase and need of the case through all its periods until the patient passes from under his hands relieved or cured of her affliction. The neglect of the essential in any one period may be fatal in result, however skillful and successful the treatment through other periods.

There can be no distributing the responsibility so as to give more weight to one period than another. The entire freight of responsibility comes to you with the patient, and remains with you only to go out with her. In every case the essentials of treatment down to the most minute lines of detail, should be mentally mapped out, and these lines followed by our surgeon with geometrical precision, and always with a ready and swift reserve at command for any and every masked trouble. If there are brilliant feats in abdominal surgery it is when an unsuspected or concealed enemy is uncovered and dealt with successfully. It is readiness for the trouble that lurks in ambush that goes to make up the successful surgeon. With our advances we will go on with our profitable discussion of essentials, reaching more uniformity of methods through that most determining of all influences—the death's rate.

I will in brief review some of the essentials, as I consider them from the standpoint of my experiences.

Irrigation is an important essential, and should be scrupulously practiced to the point of great thoroughness in all cases where pus, clot and debris are found. The escape of the contents of any form of cystoma into the peritoneal cavity—the evacuated contents of dermoid tumors, pus tubes or ovarian abscesses, or of any variety of pelvic growths—should be followed by a thorough washing toilet.

With each repeated experience, I grow more confirmed in the conviction that *drainage* is an important step in assuring speedy recovery. My experience with great numbers of

angry troubles strengthens my confidence in drainage; of course, it is important to know when and how to use it. The man who tells that he cannot remove the ovaries entire also tells that drainage is excessively used. Another tells us that drainage is harmful, and that he never operates for pus.

The resources of our surgery have been greatly added to by our *improved instruments and materials*. A large share of our surgical success is due to good instruments and pure materials, allied with *trained, vigilant nursing*. The best work is done with few and simple instruments and the best quality of pure material. For tying, *silk, pure Chinese twist*, the purest and best in quality, and the finest and least possible, consistent with safety, should be used. Silk-worm gut, of strong, clean material, gives gratifying results. It is non-irritating, and forms a beautiful angle or box suture for the abdominal walls. There should be three or four to the inch, passed with care, including more aponeurotic and muscular wall than skin or peritonæum.

We will speak of the character of the *after-treatment* without giving it a distinctive importance over any other period of the case. The patient should be kept on her back for one or two days. No food for thirty-six hours—simple liquid nourishment third and fourth day, followed by simple, nutritious food.

The triple alliance against good and successful surgery is delay, tinkering, which includes in its arsenal opium, and dirt.

ART. II.—Special Report on the Use of Indigenous Remedies at the C. S. Hospital, Petersburg, Virginia.*

By JOHN HERBERT CLAIBORNE, A. M., M. D., of Petersburg, Va.

EX-PRESIDENT AND HONORARY FELLOW MEDICAL SOCIETY OF VIRGINIA, ETC.

Prior to the publication of the circular from the office of the Surgeon-General calling attention of medical officers to

*"In obedience to orders from office of Surgeon-General C. S. A., September 15th, 1863," Dr. Claiborne, then Surgeon-in-Charge of the Confederate States Hospitals in Petersburg, prepared this "Special Report," which has not been published before. Such a "Report" is of suggestive value now, while it also forms a part of the Medical History of the section and of the times.

“the use of ‘indigenous remedies’ in the treatment of disease”—indeed, from the organization of this hospital, on the 1st of April, 1862—they had been prescribed daily by the surgeon in charge, and the hospital dispensary was never been without a reasonable supply of the same. These articles had been procured by the individual efforts of the medical officers in charge of the institution, and no requisition had ever been made for them on the medical purveyor.

During the month of September, 1862, the surgeon of the hospital, whilst on sick leave, and visiting the county of Montgomery, in the southwestern portion of this State, collected many specimens of the indigenous materia medica of singular interest. On his return to duty, he asked and obtained a temporary detail of Private Payne, of the 53d Virginia Regiment, who volunteered to collect such articles as should be designated; and who, after a few weeks absence in the mountains, returned with an excellent and abundant supply. And just here, this surgeon feels it his duty to call the attention of the department to the number and variety of indigenous medical plants to be found on the rich southern slopes of the Alleghanies of Southwest Virginia, that contribute to the magnificent flora, which adorns that interesting section of the State—carpeting the valleys, and covering the hillsides with tapestry of richest hue. In the immediate vicinity of the Montgomery White Sulphur Springs Hospital, he found some beautiful specimens. He noted amongst them the *cimicifuga racemosa*, the *sanguinaria canadensis*, the *podophyllum peltatum*, the *arum tryphyllum*, the *triossteum perfoliatum*, the *eupatorium perfoliatum*, the *serpentaria virginiana*, the *chelone glabra*, the *senega polygala*, etc., etc.

As it is presumed to be the design of the Surgeon-General that this “special report” shall be as practical, and as brief as possible, we shall proceed to describe the indigenous articles, which have been mostly prescribed in this hospital, with the results of our own observations as to their effects, dose, form of administration, etc.

And 1st—as regards *expectorants*—to which our attention

has been especially directed—not only on account of the frequency with which we had use for that class of remedies, but on account of the limited supply, which, at one time, we were able to procure from the purveyor.

Those mostly exhibited were the *sanguinaria*, the *lobelia*, the *senega*, the *cimicifuga*, and the *prunus virginiana*.

The *lobelia* was administered when we desired a nauseant and sedative expectorant; as in acute bronchitis—especially with high grade of fever—and more especially in the suffocative variety, capillary bronchitis, with asthmatic symptoms. It invariably reduced the force of the heart's action, promoted expectoration and relieved the dyspnoea. It proved itself one of the most reliable of that class of remedies. It was given in the form of tincture. Dose—From 20 to 60 drops—*pro re nata*.

The *sanguinaria* and *senega* were given in cases of less activity and force of circulation; in chronic bronchitis, and in ordinary cough, without fever, administered in the form of syrup, in teaspoonful doses, as indicated, and were undoubtedly reliable agents in the difficulties for which they were used.

In chronic cases of cough, with debility, and especially if there were any reason to apprehend incipient phthisis, *cimicifuga* was prescribed—both as expectorant and alterative—and with good effect. It has been highly recommended in phthisis, in decoction, with liquorice and morphine, and was found to be entitled to decided consideration.

The *eupatorium perfoliatum* was also freely used as an expectorant; and, in acute catarrhal fever—especially in the epidemic form, as of influenza, with deficient surface action, defective or depressed nerve force, with feeble pulse, cold extremities, pains in the head, limbs and back, with general shiverings or rigours—if given in decoction—hot—a wine-glassful every few hours, would equalize the circulation, produce a general glow upon the surface, relieve the pains, and promote free secretion—both from the mucous membrane and from the skin. Indeed, there was no remedy

which more thoroughly met all the indications in such cases.

The *prunus virginiana* has been used in the form of a cold infusion almost constantly in this hospital; but when exhibited for its supposed expectorant effect, it has been used chiefly as an excipient. A combination of expectorants, good and useful as a "house cough mixture," may be found in the following prescription:

R_y—Tinct. lobelia.

Tinct. sanguinaria canadensis.....āā ʒij

Syrup senegæ..... ʒiv

Morph. sulphasgr ss

Syrup simplicis.....ʒj

Infus. prunus virginiana.....q. s. ʒviiij

M. Sig.: Dose, teaspoonful *pro re nata*.

Lobelia and *sanguinaria* we have always used in the form of tinctures; *Senega* in the form of a syrup; *Cimicifuga*, *eupatorium* and *wild cherry* in the form of infusion, prepared in accordance with the directions in the dispensatory for officinal preparations. The *infusions of slippery elm* and of *flax seed* were also constantly used as expectorants, but only as adjuvants to others.

2nd. *Of the class of astringents.*—We often use the *quercus album*, the *rhus glabrum*, the *rhus trivialis*, and the *diospyros virginiana*.

The *white oak bark* and the *dewberry root* were used in the form of decoction (officinal), in doses of wineglassful three or four times a day. The *sumach* was used in the form of infusion of the berry, especially as a wash in ptyalism and other kinds of stomatitis, and with most excellent results. (This article has been brought into very prominent notice in the "Pharmacology of the Newer Materia Medica," compiled and published by George S. Davis, 1892, in which it is represented as almost specific in enuresis of children, in incontinence of urine, in diabetes insipida, in cystitis, etc. It is also said to "act as an excitant on the non-stripped muscles of the bladder, the uterus, and of the inferior portion of the digestive canal," p. 1111).

The *infusion of the unripe fruit of the diospyros (persimmon)*

was used with so much efficacy, as an injection in diarrhœa, that a saturated tincture was prepared for convenience, when the fresh fruit could not be procured. It is but just to add that none of these remedies are exclusively relied on in the treatment of any serious case; but in conjunction with more active agents, when indicated and procurable. For instance: The infusions of white oak bark and of the dewberry root are prescribed as drinks in chronic fluxes, during the exhibition of other remedies, and with very good results.

3rd. *Of the class of tonics.*—We have used the *serpentaria*, the *eupatorium*, the *prunus virginiana*, and the *cornus florida*, all in the form of infusions (officinal), given cold, in doses of one to two fluid ounces *ter die*. The infusions of the *wild cherry bark* and of the *dogwood* are considered especially reliable.

The infusions of the *wild cherry* is constantly used as an excipient, in the emulsion of spirits of turpentine, in low fevers, and as a daily drink in cases of convalescents, with red and denuded tongue and irritable circulation. We find that we can procure, in the neighborhood of this city, large quantities of the *prunus virginiana*, and find it preferable to that issued from the Purveyor's office, which is sometimes stale and insipid.

4th. *Of the diaphoretics.*—We have used the *eupatorium perfoliatum*, the *melissa officinalis*, and the *sativa*, or *sage*. The two latter, in decoction, given hot, and in doses of teacupful every few hours, were decidedly diaphoretic; but whether possessing any quality of diaphoresis, apart from heat and the diluent effect of the remedy, is a matter of some doubt.

The *eupatorium*, in wine-glassful doses of infusion, hot, proved a most powerful diaphoretic (this remedy acts as powerfully on the skin, in some instances, as *jaborandi*, and I would like to see an alkaloid made from it); and evidently, apart from any effect as a stimulant and diluent, it was often a relaxing and nauseant diaphoretic. It could always be relied on in any case in which a profuse diaphoresis was indicated.

5th. *Of the class of alteratives.*—We have used the *sarsaparilla Americana*, the *xanthoxylum fraxineum*, the *cimicifuga racemosa*, and the *phytolacca decandra* (both root and berry).

The first (*sarsaparilla*), given in decoction, never manifested any sensible effects that I could testify to, but I cannot say that it was totally inert. Given in combination with iodide of potash, or the bichloride of mercury, it produced most excellent results.

The *prickly ash* has been used very freely, in decoction, one wine-glassful three or four times a day, and, apparently, with good general results, though it was difficult to trace its especial effects, as in case of most alteratives. As the excipient of the bichloride of mercury, when exhibited in secondary syphilis, and in chronic rheumatism we have considered it a valuable remedy.

The *cimicifuga racemosa* has been mostly used in chronic rheumatism. It was given in decoction, in doses of two ounces three or four times a day. It had the effect of lowering the circulation, and sometimes of producing a sense of constriction and of pain about the forehead, but it was followed by general good results. (In private practice this proved a decidedly good remedy in chorea.) Occasionally it acted as a decided laxative. Indeed, this remedy was largely, and I suspect somewhat empirically, used as a "house remedy" in the hospital.

The *poke root* was used internally, in the form of a saturated tincture of the fruit, in doses of one teaspoonful three times a day. The immediate effect was sometimes nauseating, oftener a gentle purgative; and the permanent effect, in chronic rheumatism, for which it was mostly prescribed, decidedly good. The decoction was often used in that form of cutaneous disease, of doubtful and varied classification, known as "*camp itch*." Its use was attended with no little pain and smarting in acute cases, with inflammatory symptoms. In the chronic eruption, it was often of service. In the acute cases, the decoction of the *root of the broomstraw*, to be found in such profusion in this section of Virginia, was found much more satisfactory.

ART. III.—Observations on the Relation of the Reproductive Organs to Disturbances of the Cerebro-Spinal Centres of Woman.

By THOMAS A. ASHBY, M. D., of Baltimore, Md.,

PROFESSOR OF DISEASES OF WOMEN IN THE BALTIMORE MEDICAL COLLEGE; FELLOW OF AMERICAN GYNÆCOLOGICAL SOCIETY, ETC., ETC.

The influence of the organs of generation in provoking disturbances of the cerebro-spinal system of woman has long been recognized. Hippocrates first called attention to the reflex disturbances incident to pregnancy, and characterized the hystero-neuroses of pregnancy as the doubtful signs of this condition. The Greek and Roman writers described the disturbances of the nervous system resulting from changes in the female genitalia. But it is not necessary to call in the aid of history to establish the relation of cause and effect between the reproductive and nervous systems, since common observation and daily experience have confirmed the opinion of ancient as well as of modern authorities.

Menstruation, pregnancy, and lactation are characterized by greater or lesser psychical disturbances, even when these functions are performed under normal physiological conditions. The nerve centres take cognizance of the sexual manifestation, and respond to the stimulus imparted by the function.

At the inauguration and at the subsidence of the reproductive epoch, these psychical disturbances are most apparent. The shyness, reserve, and sensitive impulses, which are associated with the awakening of the sexual sense at puberty, are no less marked than the gloom, depression, and general let down so often observed in women at the menopause. In the lower animal kingdom illustrations of the sexual influence over the nerve centres are even more marked. The female of the domestic fowl, the cow, and the sow, the most amiable and docile of all domestic animals, under the keen stimulus of maternity, become irascible, ill-tempered, and courageous. That such perver-

sions of the psychical centres are referable to influences imparted by the reproductive organs can hardly be questioned; and yet we must assume that such reflexes are purely physiological, and provided for in the economy of nature. The mental faculties seem unduly exalted by reason of such instincts as maternity suggests—the need of caution, cunning, and courage in defence of the offspring.

It would seem that we have in these phenomena a very correct explanation of the very close relation existing between the reproductive and nervous systems, and a reason for the modifications which take place in the latter as a result of the stimulus imparted by the former. Nature, ever true to her laws, obviously arranged that the nervous organization of the female should respond to the increased responsibilities of maternity, and present such psychic changes as would enforce a more careful guardianship over the dependent and helpless offspring. Hence, we find such modifications of nerve force as would seem to meet the conditions of a physiological law without implying a pathological influence. The reflex disturbances are, therefore, physiological and do not indicate a neurosis, except under abnormal stimulation.

We can fully understand the necessity for the closest interdependence of the nervous and reproductive systems. It has been customary to explain this sympathetic relation through the instrumentality of anatomical structural associations. The uterus is bountifully supplied with nerve fibres from ganglia within the pelvis, which are closely related to the larger ganglia of the great sympathetic system, whose fibres unite with the cerebro-spinal centres. The nerve supply is ample for organic life, with a full reserve for the transmission of reflex influences. We can understand how artificial and pathological conditions can awaken disturbances in distant centres by constant irritation of the local fibres.

In the lower animals, as well as in the lower races of the human family, the relations between the reproductive and nervous systems are not disturbed by artificial states of

either system. The mental manifestations witnessed correspond with the healthful stimulus of the reproductive modification imposed by gestation and maternity, and subside with the withdrawal of these influences. When we come to a study of the more artificial and more highly organized conditions under which many members of the human female family are found, numerous explanations are presented for the varied disturbances which influence the relations between the reproductive and cerebro-spinal systems. On the one hand are varied and prolonged local irritations sending out from the pelvic organs constant impressions, and on the other hand are impressible, sensitive and irritable nerve centres receiving and registering the impressions received and sending the same to neighboring and to distant nerve cells and fibres. These two prominent factors, at work in provoking psychic disturbances, must necessarily vary in their extent, influence, and manifestations according to the varying conditions which underlie their presence.

To correctly understand the relations of the reproductive organs to disturbances of the cerebro-spinal centres, these relations must be studied from a standpoint which will give due prominence to the two facts here presented. To assume that all psychic disturbances are of reflex origin, and dependent upon the influence of the reproductive system, is as unwarranted as to assume that all the pathological conditions of the reproductive system provoke reflex disturbances. It is well known to clinical observers that neither of these assertions is true. During recent years both psychologists and gynæcologists have come to consider this subject of reflex neuroses in women from a more unbiased standpoint, and we are beginning to see light where there was at one time vast darkness. It cannot be said, however, that a perfectly clear position has been reached, for a vast amount of clinical observation and study must be gone through with before the true position can be determined in regard to the correct relation of the one system to the other. In the very nature of the case,

the subject is a difficult one to study from an unprejudiced standpoint, since the minds of men are prone to see facts from the point of view nearest to their personal convictions. For obvious reasons, the psychologist is led by his studies to regard the neuroses as of centric origin and independent of remote influences, while, on the other hand, the gynæcologist continues to remove normal ovaries and to punish the uterus with caustics and escharotics, on the assumption that these organs and their conditions are responsible for neurotic disturbances.

It is needless to assert that the time has come for a clear study and calm consideration of so important a subject as the one which confronts scientific and honest observers in these two fields of special work. It is not probable that a correct position will be reached until both parties are prepared to accept clinical evidence and to record carefully observed facts. It is a field offering such a rich harvest to the pretender and to the quack, that an honest mind needs to walk with careful footsteps to avoid the traps and pitfalls in its pathway.

A clinical study of the reflex neuroses presents innumerable contradictions and surprises. To one who regards the lesions of the intra-pelvic organs as positive evidence of reflex disturbance, there is need of the most careful warning. Intra-pelvic lesions present innumerable confusions. Many of the grossest, as well as the mildest, varieties produce no reflex disturbances whatever. Others are most pronounced in their influence upon the nerve centres. It is quite evident, from the consideration given this subject, that no classification can be made, and that the reflex neuroses must be viewed from the standpoint of the nervous system rather than from the condition of the local intra-pelvic lesion. There is an inherent stability of the nerve centres in many women which renders them irresponsive and indifferent to local irritations, whilst, on the other hand, there is a large number in whom can be found "a congenital or acquired deficiency in the power of nerve elements to effect the storage of force in nerve tissues," which deficiency ren-

ders them responsive to local irritations. When we approach the study of reflex neurosis from this point of view, it is quite evident that the chief fault is inherent in the nerve centres and not primarily in the sexual organs.

The latter may and do make demands upon the former, so that, clinically speaking, the etiological influence resides in the reproductive system, whilst the results of this influence are borne by the nerve centres.

In seeking a cause for nervous disturbances, these facts demand consideration. It has been shown, by clinical observation, that many of the neuroses have their origin in the manner here explained, and only respond to treatment when the local influence is discovered and removed. There are certain forms of local intra-pelvic lesions which seem to make unusual demands upon the nerve centres, and to provoke obstinate forms of nervous disturbances. Among these local lesions nothing is so fruitful of reflex irritation as laceration of the cervix uteri. This lesion involves two special forms of local irritation. In the one case, we have a complete or partial repair of the wound by faulty cicatrization, in which the terminal nerve fibres are compressed by the dense connective or scar tissue. In the other case, repair is a failure, and the torn flaps remain as sources of constant irritation for months and years, inviting subinvolution, hyperplasia, and glandular hypertrophy. In these cases the local distress is often insignificant. The patient sooner or later begins to suffer in her nerve centres in a way which is characteristic. Sacralgia is often a noticeable sign, suboccipital neuralgia another. Hysteria is seldom observed, but more or less mental depression and gloom are now and then observed. The stomach is often involved, the patient complaining of nausea, indigestion, and occasional vomiting, of a purely reflex origin. These cases present innumerable nervous disturbances, but those referred to are most marked. An intense and obstinate suboccipital neuralgia is one of the most noted and characteristic symptoms of cervical laceration, and may often be accepted as diagnostic of this lesion in a large class of cases prior to a

recognition of the lesion by an examination. Reflex disturbances, dependent upon cervical tears, disappear with wonderful promptness when the tear is properly corrected. I know of no operation in gynæcology which promises such hopeful results.

I do not wish to be understood as claiming that every lacerated cervix produces reflex disturbances. The contrary I know to be the case. I have often discovered the lesion, when it must have been in existence for a number of years, without the least untoward influence upon the cerebro-spinal centres. It is just such cases as have led to skepticism in regard to the neuroses of supposed reflex origin. We have, in such cases, only another illustration of the inherent stability of the nerve centres to reflex impressions.

Some years ago a lady came under my care with an obstinate form of uterine catarrh. She was a woman of very superb mental and bodily health, and the last person one would assume to be neurotic. In the progress of her disease, the acrid discharge from the uterus wiped off the epithelial covering of the cervix and a small erosion made its appearance. The advent of this erosion was the signal for the most violent outbreak of hysteria I have seldom witnessed. This patient became so disturbed in her nerve centres that fears were entertained by her friends as to her mental soundness. I treated her for some months before I could correct the uterine discharge and heal the erosion. With the cure of the erosion here hysteria disappeared, and her nervous system regained its tone.

This was, in my opinion, a typical reflex neurosis. I have treated dozens of cases of erosion of the cervix uteri with no such reflex disturbances as were observed in this case; yet this latter fact does not disprove the reverse of the first fact. There was inherent in the nerve centres of this patient an instability which only required the irritating influences of a minor uterine lesion to provoke a violent disturbance. The causative influence may have resided as much in the nerve centres as in the uterine lesion; but the removal of the uterine lesion was an essential step in the correction of the nervous disturbance.

From whatever position we view this subject, we must

give due consideration to clinical observations, for such experiences teach more than speculative assumptions.

In the wide field of intra-pelvic pathology, there are many conditions of the uterus and ovaries which give no results in provoking reflex neuroses. The grosser lesions are strikingly exempt in the exercise of a disturbing influence over the nerve centres. Patients who have ovarian tumors, uterine cancers, fibroid growths, and intra-pelvic pus accumulations, are rarely subject to the reflex neuroses. This at least has been my personal observation. On the other hand, the minor forms of ovarian disease—such as chronic ovaritis, uterine and ovarian displacements, endometritis, functional disturbances of menstruation—are potent factors in causing obstinate reflex disturbances of the nerve centres.

The only explanation I can offer for these anomalies will appear in the fact that the latter category of ailments largely belongs to weak, debilitated, and delicately organized women, whose physical degeneracy often corresponds with exaltation of nerve force and energy, with deficient reserve nerve power. The nervous organization of such women is kept in constant disturbances by the demands made upon it by the reproductive apparatus, which are in apparent excess of its reserve supply. These women become nervous, irascible, peevish, hysterical, and at times positively maniacal under the irritating influences of irregular or disturbed function of the generative organs. The most trivial disturbances are often sufficient to arouse the reflex neuroses, since the essential disorder is in the nerve centres themselves.

It is to this class of cases that we must turn for clearer results from clinical observation. I am clearly of the opinion that a joint study of this class of patients by the psychologist and gynæcologist would lead to good results to the patient. It would bring about a more careful investigation of the reproductive organs, with a view of determining the presence of lesions which might have a causative relation to the mental condition of the woman, and, on the other

hand, might show that no such relation existed. The condition of the patient would then receive the proper consideration to which it was entitled, and would escape the harmful practice of prolonged and injudicious local treatment. The practice of constantly treating the uterus, or of removing normal tubes and ovaries, would fall within proper limitations, and the charges, so often brought against the gynæcologist, of unjustifiable treatment of such women, would lose much of their force.

In the present position of our science, there is often room for honest doubt as to the proper course of procedure in the management of the so-called neurotic women. That they tax the judgment and skill, both of the gynæcologist and psychologist, will be frankly admitted. The method of dealing with such individuals must be decided by clinical observation and experimental study. In such forms of the neuroses, especially the hystero-epileptic, oöphorectomy is of positive benefit. Yet I clearly believe this operation should not be approached except as a *dernier resort*. Other methods of treatment should be most carefully and faithfully tried, and the psychologist should have an opportunity to examine the case and to formulate an opinion before the aid of the knife is called in. This method of procedure would offer the advantage of conservatism, and would establish a rational basis for action.

Chronic ovaritis and ovarian displacements are conditions which bring about unusual local irritations and intra-pelvic pain most frequently associated with psychical disturbances. Such women suffer not only during menstruation with intense intra-pelvic pain, but at irregular intervals from pelvic distress and discomfort. Many of them become extremely peevish, irascible, hysterical, and at times maniacal. They are often ready to accept any form of treatment which promises relief. In my experience, very little can be done for such cases short of removal of the diseased or displaced ovary. The operation is based on strong ground, since there exist positive physical signs to explain the presence of the physical and psychical disturbance. I have operated

upon four cases of ovarian dysmenorrhœa, associated with constant intra-pelvic pain and ovarian displacement. All of these cases recovered, with a complete removal of the intra-pelvic pain and restoration of health. There was more or less psychological disturbance in all of these cases, though the operation was not undertaken, except in one case, with a view of correcting the reflex symptom. In this case the patient had hystero-epilepsy, which disappeared subsequent to operation.

One year ago a patient, 29 years of age, single, came under my care with a history of some eight years of invalidism, dependent upon intra-pelvic disease. Her history indicated a previous intra-pelvic inflammation, with a presumable pelvic abscess. Physical examination revealed a highly sensitive, tender, and displaced left ovary. There was no appreciable enlargement of the ovary, but the least pressure of either ovary induced severe sickening pain. She suffered with intense pain during menstruation, and was usually confined to her bed at this time. Her cerebro-spinal centres were seriously involved. She was hysterical, moody, peevish, and fretful. She complained of pain along the spine and of post-cervical and suboccipital neuralgia. She had the most aggravated form of chorea I have ever witnessed, the movements being confined to the muscles of the left hand, arm, shoulder, and left side of her head and face. Her muscles were in constant motion, and were only quiet during sleep. She had been treated by a most intelligent physician, who had exhausted every resource of the materia medica without avail. I kept this patient under treatment some four months, trying every method of local and constitutional treatment familiar to me before resorting to the knife.

I finally advised an oöphorectomy, and removed both ovaries. The left ovary was low down in the pelvis, slightly tied up in adhesions, and had all the physical characteristics of an old chronic ovaritis. The right ovary was of usual size, but was a mere shell of stroma filled with serum. It ruptured in removal and came out as a sac. This patient made a prompt recovery from the operation. Her chorea and other nervous disturbances disappeared, and she is now in as good mental and physical health as could be desired.

The operation was performed during the month of Feb-

ruary of last year (1892). She has recently sustained a great domestic grief, and yet this moral shock has in no way disturbed her nerve centres. The result is most satisfactory, and bids promise to remain so.

Whilst such cases are not exceptional in the history of gynecology, they are most encouraging in showing the results within reach of the knife in carefully selected conditions. It will be borne in mind that there were present in this case positive physical signs pointing to intra pelvic disease and suggesting the origin of the reflex disturbances; yet when the ovaries were removed, their condition was such as to have made a diagnosis of the lesion impossible without an exploratory incision. One of the chief difficulties met with in the management of neurotic women is the impossibility of finding in a large number of cases an intra-pelvic lesion to explain the origin of the reflex disturbance. Minor conditions may and do often exist, which are accountable for a local irritation which is only expressed by the nervous system. The literature of medicine is full of such cases, which, if correctly reported and observed, show the strongest argument in support of oöphorectomy. Yet I cannot help but feel that the removal of the ovary as a presumable cause of a neurotic condition should be approached in the most cautious and conservative manner, especially when there are no physical signs of ovarian disease.

Such cases should receive the closest care and observation from a psychologist, and every known method of medication for such conditions should be employed before subjecting them to the knife. When this plan has been followed with negative results, an oöphorectomy may be admissible purely as an experimental test and not as a positive assurance of recovery from the neurotic condition.

Clinical testimony will show surprising results in a large number of these cases. Not a few are restored to perfect mental health, whilst others give no indication of the least benefit.

The question then arises, Are we justifiable in assuming

the risk of an oöphorectomy with such uncertainties in view? The answer to this question involves a moral as well as professional responsibility, and must be judged by the surroundings of the patient, the necessities of her special case, and the attending circumstances which call for radical methods. Whilst the science of surgery assumes to be exact and to deal with facts from a standard of ascertained measurement, the practice of surgery is full of expedients and of rules of propriety and distinction. The surgeon must, therefore, deal with many conditions which can only be approached from the standpoint of expediency and of dire necessity. A conscientious regard for truth and for the best interest of his patient should outweigh every other consideration in estimating the line of action in any given case. He should take up or lay down his knife in every case which appeals to his sense of duty and responsibility under the existing circumstances, and not let self-interest or biased motives lead the way to a rule of action.

A study of the sexual neuroses opens up a wider field than can be covered in a short clinical paper such as I have attempted to offer at this time. The various perversions of the genesic instinct, indicating unnatural manifestations of an imperious functional want, are closely related to the neuroses. Sexual hypochondriasis involves both the male and female in the highest as well as in the lowest social walks of life, and, in its coarser grades, is a vice which permeates throughout the entire animal kingdom. Juvenal mentions the hysterical insatiety of certain women who recognized the salacity of the donkey as affording the most voluptuousness. Sodomy, pederasty, and tribadism undoubtedly owe their existence as much to neurotic states as to sexual perversions. The moral, physical, and psychical disturbances claim the most careful study and consideration from the physician, since they begin in improper sexual and psychic hygiene at the time of the awakening of the sexual function. Much can be done at this time through moral, legal, and social influences to modify the imperiousness of the sexual appetite and to direct the instinct into natural

channels for its manifestations. Sexual as well as psychical disturbances are kindled by improper associations and influences; by foul literature, baseness and voluptuousness in art, and unbridled liberty of self-indulgence.

The prevention of the sexual neuroses begins with the early observance of physical and moral laws, with the cultivation of the function of self-control, of a love for wholesome out-door exercise, of pure literature and pure association. The hereditary influence should be early recognized, and the acquired influence should be studiously avoided. In this way we may prevent the sexual neuroses in many women.

That insanity exercises a peculiar influence upon the sexual organs of women is shown by reliable observations. In the Toledo Hospital for the Insane, Dr. C. A. Kirkley (*Jour. Amer. Med. Association*, October 15th, 1892, page 553), has ascertained that of 595 inmates, perverted sexual function was shown to exist in 230—nearly 39 per cent. This number admitted that they practiced masturbation whenever the opportunity presented. Most of these patients were either married or widowed, and 82 practiced this unnatural habit within and during the climacteric period.

"These statistics," says Dr. Kirkley, "suggest that whatever the cause may be that produces the mental disorder, it so disturbs and perhaps stimulates those nerve centres that control the sexual desire that masturbation is the result."

"Reports," says the same authority. "have appeared from time to time concerning the effect of gynæcological treatment upon the mental condition. Marvellous and, in some instances, magical effects have been reported. Within a year a case was reported in a Western medical journal that had been insane for years. The physician removed the uterine appendages, with a view of curing the insanity. Immediately upon recovery from the anæsthetic, the mental equilibrium was restored and has remained so ever since, a period of several months."

Seventy-five cases were treated in the Toledo Insane Hospital in a gynæcological way, but the results of treatment

do not sustain the position that the normal mental condition is restored upon a disappearance of the gynæcological disease. Several of these cases are, however, of such interest that I report them here :

CASE 2.—N. B. O., American, aged 25, unmarried, insane a year. The record gave heredity as the predisposing, and her mother's death as the exciting cause. The type of insanity was suicidal melancholia. She was treated for chronic endometritis, complicated by acute vaginitis, probably of specific origin. The disease entirely disappeared within a few weeks, and her mental condition so much improved that she was discharged.

CASE 3.—K. S., Irish, 26 years old, married, the mother of one child 18 months old. She had been insane four months, the attack coming on very soon after a miscarriage, being in very feeble health at the time and very anæmic. "General debility" was given as the predisposing cause. The form of insanity was acute melancholia. The uterus was enlarged from subinvolution, retroverted, and there was unilateral laceration of the cervix extending to the vaginal insertion. The laceration was repaired, potassium iodide given, hot water vaginal douches employed twice a day, and the displacement corrected as much as possible with a glycerine tamponade. The uterine disease was entirely relieved in due time, and her normal mental condition was completely regained. Nine months after leaving the hospital she was still in good health. The prompt recovery from insanity in this case can be directly attributed to the cure of the uterine disease.

CASE 4.—A. F., American, aged 33, married, mother of three children, had been insane five years. Her record gave "child-bearing" and "anæmia" as the exciting causes, but the predisposing cause was not given. She had chronic endometritis and unilateral laceration of the cervix. The uterus was curetted and the laceration repaired. The operation accomplished all that could be desired as far as the uterine condition was concerned, and the general health somewhat improved, but a year afterward her mental condition remained unchanged.

Dr. Kirkley's conclusions are worthy of practical consideration. He says:

"While disease of the sexual organs exists in a large proportion of insane women, the effect upon them of the

cure of those diseases hardly establishes any direct relation between the two conditions, except in occasional instances, and, when that relation exists, disease of the sexual system is often rather a result than a cause. The relief of any co-existing disease in an insane woman, whatever it may be, will be of benefit to her mentally just in proportion as her general health is improved. Pathological conditions are very much the same, whether they exist in the sane or insane. Functional insanity may, of course, result directly from disease of the procreative organs, but that different types of chronic insanity are very frequently the result of those diseases may be questioned. The nerves and blood vessels are intimately related to the cerebral cell, and may interrupt or even prevent its development or reparation. For its life, it depends upon the parent organism, and the cause of its perpetual change must exist in some way within the nerves or capillary blood vessels, or both. Stimulation beyond the possibility of repair results in injury to the cell, therefore a pathological condition must result, which interferes with the functions of the brain, and insanity follows. Diseases of the reproductive organs in insane women and their management presents a vast opportunity for the gynæcologist, and further observation will no doubt establish the exact relation existing between those diseases and insanity. Every insane hospital should have its gynæcologist, not only to provide better care for this unfortunate class of patients, but to lighten the burdens and cares of the superintendent, who in most institutions has more than his share. The future for gynæcology in this field is full of promise."

CONCLUSIONS.

1st. The strongest sympathy exists in the relations of the reproductive organs to the cerebro-spinal system.

2nd. Lesions of the reproductive organs are capable of arousing the most constant and serious disturbances of the nerve centres, and such disturbances are out of all proportion to the local lesion.

3rd. The neuroses are dependent upon an instability of the nerve centres themselves, and may exist independent of any irritating influence outside of the nerve centres. Moral causes may operate to produce such disturbances quite independent of lesions within the pelvis.

4th. A joint study of such cases by the psychologist and gynæcologist will be productive of much good to the patient, and lead to judicious and conservative methods of treatment.

5th. The treatment of intra-pelvic lesions will lead to the cure of neurotic conditions in many women by a removal of the cause of local irritation.

6th. Oöphorectomy should not be employed, except as a *dernier resort*, for the cure of reflex disturbances, unless there are present pronounced physical signs of ovarian disease or intra-pelvic inflammation.

7th. Diseases of the reproductive organs in neurotic and in insane women demand as careful attention as those in sane women.

ART. IV.—The Treatment of Uterine Fibroids.*

By W. P. CARR, M. D., of Washington, D. C.

I shall not refer to sub-mucous or polypoid tumors, because I think there is no question as to their treatment; and as the treatment of other fibroids will depend very much upon the degree of danger and discomfort that we believe them likely to cause, I shall first endeavor to point out the gravity of the affection.

The traditional idea of a fibroid tumor, that it is a harmless growth, not endangering life, giving rise to more or less inconvenience solely on account of its size, and likely to shrink after the menopause, so as to cause no further trouble, is a difficult idea to get rid of. But it is very certain that this view of these growths must be greatly modified to coincide with the facts as we find them to-day. Either the older writers failed to recognize the dangers and suffering to which they gave rise, or the nature and clinical history of these tumors have changed.

In the days when abdominal operations gave a mortality

*Read at a meeting of the Medical and Surgical Society of the District of Columbia, February 13th, 1893.

that was simply appalling, and when there was no known radical treatment that was not almost certainly fatal, it was natural that physicians and surgeons should endeavor to put the best face upon the matter, and encourage themselves and their patients with the belief that the tumor was harmless, and that the menopause would bring relief. But we are now in a position to face the problem fairly.

Just how much danger exists in any given case, it may be impossible to say; but that fibroid tumors may and do end life in several different ways, there can be no question. Four fatal cases have come under my own observation within the last four years. I will give, briefly, the results of the autopsies in these four cases:

CASE I.—A young colored woman was delivered of a child by Dr. W. D. Harigan, at Columbia Hospital, and died a few minutes after delivery in collapse. The uterus was found to contain a large number of small fibroid tumors, and was raw and bleeding over a large extent of its surface. A large quantity of blood in the abdominal cavity. Evidently the fibroid uterus, while distended by the foetus, had formed numerous vascular adhesions which, when the uterus emptied itself and contracted, were torn, and gave rise to a fatal hæmorrhage which nothing could have prevented.

CASE II.—A white woman, aged 37 years. Fibroid tumor completely filling the pelvic cavity and obstructing both ureters. The left ureter being an inch in diameter and the left kidney distended with urine until it was a mere sac. The right ureter was but slightly distended, but the kidney was in a state of acute inflammation.

CASE III.—A subject in the dissecting room was found with an immense hydro-nephrosis due apparently to pressure of a fibroid tumor upon the ureter. There was also abdominal dropsy, and the other kidney was apparently diseased, though, as the subject had been injected, it was difficult to determine this point.

CASE IV.—Also a subject in the dissecting room, had evidently died from obstruction of the bowel by a large fibroid tumor, which so completely filled the pelvis that I was unable to pass my finger behind it in the rectum, either from below or from above, after opening the bowel.

I mention these four cases to show that the dangers are

not simply imaginary. Unfortunately, there are no reliable statistics giving the death-rate for fibroid tumors, and the deaths for which they are primarily responsible are usually, I think, attributed solely to the immediate cause. When we see them, however, continually giving rise to local peritonitis, to ascites, to albuminuria, to varicose omental veins, to gellatinous degeneration of the omentum and other tissues, it seems foolish to deny that they are a source of very great danger to life. Again, they are liable to undergo cystic degeneration, or even malignant degeneration. Undoubtedly, too, the effect of the menopause has been very much over-estimated. I believe nearly all late writers on the subject agree that, in a large percentage of cases, the tumors continue to grow, or undergo some degenerative change, and grow even more rapidly than ever after the menopause.

Cystic degeneration is quite likely to occur at this time, and cause a very rapid growth. Tumors that have formed vascular adhesions to the abdominal parietes or viscera, will no longer depend upon the uterus for nutrition, and will not be affected by the menopause; and tumors in which cystic degeneration has begun, will most likely not cease to grow after the cessation of menstruation. For my own part, I believe that, in a very large proportion of cases, these tumors cause death, and that, in every case, they tend to shorten life, by predisposing to other diseases, and by lessening the power of resisting attacks of acute disease.

A woman with a large fibroid and embarrassed respiration, dies of pneumonia, and the tumor is not mentioned in the death certificate, simply because we have been so long taught to regard it as a harmless affair; and yet, in all probability, had her lungs not been pushed up and crowded into an abnormally small space, she would have recovered, or, perhaps, not have had pneumonia at all.

But, aside from the danger to life, a point is finally reached in the case of nearly every woman with a fibroid tumor when life becomes a burden, and when she will will-

ingly undergo any operation that gives a hope of relief. Unfortunately, by this time, the tumor is usually very large—has contracted numerous adhesions, or caused secondary disease, and its removal will confront the surgeon as one of the most formidable of abdominal operations.

It is a powerful argument against the benignity of these tumors that women are willing to submit to such operations for their removal, and that surgeons are willing to take such risks for their cure. A surgeon must realize the utter hopelessness of other treatment and the dire consequence of palliative measures, before undertaking one of these formidable and dangerous operations. And yet, if the tumor is threatening life, by crowding the vital organs, or making the patient's life so unbearable and helpless that she is willing to run any risk for a chance of relief, he must either make up his mind to let her die, to let her remain a crippled, suffering creature until some intercurrent disease kindly ends her pain, or he must resort to hysterectomy. And formidable and dangerous as this operation, under such circumstances, must necessarily be, there can be no doubt of its propriety. It is not only justifiable, in my opinion, but an urgent necessity.

My main object, however, is to call attention to the serious and dangerous nature of fibroid tumors of the uterus, and to urge a radical treatment while they are small, so that we shall be saved the horrors of a compulsory hysterectomy later on. When the tumors are no larger than a hen's egg is the best time for their cure. At that time, I am confident that removal of the uterine appendages will certainly cause them to disappear, or to shrink and give no further trouble. This operation is not new; but it has never been practiced at a sufficiently early period to give the best results. Indeed, in many instances, we are told that it was done because hysterectomy was impossible on account of adhesions. We could not expect it to be successful under such circumstances, and there is every reason to believe that, in most of the unfavorable cases, the tumors were large, had formed vascular attachments, and were not

dependent upon the uterus for nutrition, or that the ovaries and tubes were not completely removed. It has been shown by good authorities that a small bit of ovary left behind, or the failure to tie off the tube close to the uterus, is sufficient to cause failure in the attempt to bring about the artificial menopause. Certainly, women have been known to menstruate and conceive with only a small bit of one ovary left. Every one who has done an oöphorectomy, knows how easy it is to leave behind a bit of ovarian tissue or an inch or so of tube, and, in view of these facts, I am surprised to find statistics as favorable as they are.

Tait, in his book on "Diseases of Women," gives the result as completely satisfactory in 48 out of 50 consecutive cases. One of the failures was due to mistaken diagnosis, the tumor proving to be malignant. The other failure was a soft myoma—a tumor very difficult to distinguish from sarcoma. Hegar gives 33 completely successful out of 55, and his are the most unfavorable statistics I have seen. Fehling, Prochwonik, Tissier, Bouilly, Segaud, and Terrillon—all give over two-thirds of their cases as successful. But nearly all these operations were for large tumors. I think it surprising that the results are so good, and find myself forced to the conclusion that removal of the uterine appendages, while the uterus is still not larger than a man's fist, and when no adhesions have been contracted, will be found a radical cure for fibroid tumors of the uterus. Even should the operation fail to check the growth, there would still be time, if the case were properly watched, to do a vaginal hysterectomy, and that operation would be greatly facilitated by the previous removal of the appendages. I would, therefore, urge *early diagnosis and early removal of the uterine appendages as the most important treatment* of uterine fibroids. Indeed, it seems to me, that it is almost criminal to neglect what appears to be the only remedy that is both certain and safe.

Of course we cannot force patients to submit to the operation, but we can state the case to them plainly, and if we do so I think, in the great majority of cases, their consent

will easily be gained. The danger of the operation, in the hands of a careful operator, is almost nothing. Statistics give a mortality varying from 1 to 3 per cent. Tait gives 1.26 per cent. in 260 cases. But even this small death rate is largely due to unrecognized complications, and, in the case of an otherwise healthy woman, perfect recovery is almost certain. I say perfect recovery, because there is no liability to hernia, fistula, or trouble from bowel adhesions, or omental adhesions, as there is after severe abdominal operations. There can be no serious objection on the score of making the woman sterile, as no one could wish a woman with a fibroid uterus to become pregnant.

If, then, the tumor is discovered while it is not more than three or four inches in diameter, I would recommend and urge this operation, even if it was thought likely that the menopause would occur naturally within a year or two. For there is too much danger in delay, and the menopause is too uncertain, and might be ten or twelve years in coming on, even when we had every reason to expect it at once.

If the tumor is large, the same operation may be done; but, in addition, any adhesions that have formed should be carefully broken up or pediculated masses removed.

In some cases, it might be hard to decide between oöphorectomy and hysterectomy, but I think, when the tumor is already causing serious disturbance by its size, hysterectomy or some modification of that operation would be preferable. However, I do not propose to go into what would be a tedious discussion of the exact method of operating in each case, or to draw exact lines of measurement for hysterectomy and for oöphorectomy. The operator must use his judgment. My object is to call attention to the gravity of these tumors, and to the fact that surgery has a sure and comparatively safe remedy for them if the general practitioner, into whose hands they usually come at first, will only refer them in time to the surgeon, and not wait, as he so often does, until it becomes a very grave or hopeless case.

In this connection, I cannot do better than relate briefly the three cases upon which I have operated myself:

CASE I.—A single white woman, 26 years old, was sent to me by Dr. Rozier Middleton, in March, 1890. She suffered greatly from pelvic pain and backache and vesical tenesmus, and had been confined to bed most of the time for the previous three or four months. Examination showed that she had three small fibroid tumors, the largest about the size of a walnut, projecting from the anterior wall of the uterus, and evidently causing the vesical tenesmus. I advised removal of the uterine appendages, and she readily consented. The operation was done May 27th, 1890, with the assistance of Drs. Middleton and Shute and a trained nurse, of whom I shall have more to say later. The patient made a good recovery, and six months later no sign of the tumors could be detected. Two years after the operation, she was in excellent health.

CASE II.—Strange to say, proved to be the nurse who assisted me with the first case. She came to me in December, 1891, saying that her health had completely broken down; her homœopathic physician told her she had a tumor and would have to undergo an operation, and my success with the former case had caused her to choose me to do the operation. She was anæmic from hæmorrhage, that had been very troublesome for two years; suffered much pain in the back, and was unable to have a movement of the bowels without great difficulty and pain.

Examination showed plainly multiple fibroids, some of which were pediculated and pressing upon the rectum. I operated December 8th, at the Homœopathic Hospital, removing the appendages and also three pediculated subperitoneal tumors, about the size of lemons, that were pressing on the rectum. There were left about twenty intramural nodules, one of which was as large as a hen's egg, the rest quite small.

This patient was nursing a case just one month later, and has enjoyed better health since the operation than ever before. I examined her just one year after the operation, and found the uterus much smaller than at the time of the operation. I have never had a patient so pleased with the result of an operation.

CASE III.—I operated upon this patient at Garfield Hospital, June 28th, 1892, removing the appendages for chronic salpingitis. She had a fibroid about the size of a walnut. I examined her in December of the same year, and found the whole uterus not much larger than a walnut.

It may be said that three cases are not enough to prove

anything; but when an operation succeeds in one's own hands three times in three cases, it is bound to produce an impression, and make him look around for the reason of failure on the part of others. The more I have looked into it, the more I have become convinced that failures are due to too tardy or imperfect operations. To briefly summarize, I would urge—

1. Early diagnosis and removal of the uterine appendages.
2. Should this fail, vaginal hysterectomy.
3. In case of larger growths, the surgeon must decide in each case between oöphorectomy and some form of hysterectomy, or a combination of myomectomy and oöphorectomy; but operate promptly, and not let the tumor grow while waiting in vain for the menopause.
4. With very large tumors, demanding a very dangerous operation, it may be proper to wait for the effects of the menopause, provided it is to be expected within a year or two, and life does not seem to be in danger.
5. After the menopause, growing tumors demand hysterectomy more urgently than ever.

I have not mentioned electricity, the only other method of treatment for which any serious claims are made, because I believe it to be, in any given case, more dangerous than the proper operative procedure, if it be used in such manner as to produce anything more than a mere palliative effect.

Electricity will check hæmorrhage; so will the actual cautery. Electricity may even diminish the size of the tumor considerably, by condensing it and diminishing the amount of fluid. It will also stop the pain in many cases. But all these effects are temporary; the treatment is tedious and expensive, and the tumor is continually getting in worse shape for the operation that will almost inevitably come at last; and it is reasonable to suppose that it favors the formation of adhesions, thus making a hysterectomy more difficult and dangerous, and, at the same time, more necessary.

This idea is borne out by all operators, who complain that their worst cases are those that have been treated by electricity.

ART. V.—Salicine in Chronic Diarrhœa.*

By JOHN S. HUGHSON, M. D., Sumter, S. C.

A case that came under my observation and treatment during the past fall has recalled to my mind the use of salicine in chronic diarrhœa. And as our object is to bring out, in every way possible, such things as are practical and useful in the every-day work of the physician's life, I will refer to this treatment, and briefly relate two or three cases in which it was specially indicated.

It is singular that a remedy of such great value in certain cases of chronic diarrhœa should find so little place in the standard works on materia medica and therapeutics. Among the many books on practice and materia medica that I have examined for a mention of the use of this well-known medicine in this particular class of diseases, I find a reference to it in only four.

In Pepper's *System of Medicine*, it is barely mentioned among a number of other remedies as being sometimes useful in diarrhœa. Bartholow, in his *Materia Medica and Therapeutics*, says, "Salicin is an excellent stomachic tonic in *atonic dyspepsia*, and is a serviceable remedy to prevent the fermentations which take place in the foods in cases of *gastro-intestinal catarrh*. In the *chronic diarrhœa* of children it has been employed successfully." Dr. Aitken, in his *Practice of Medicine*, says, "there are cases of diarrhœa with a *clean tongue*, which will not yield to opiates, astringents, or stimulants, either singly or combined, and which probably depend on a want of tone in the intestine; and in these cases, *five grains* of *salicine* every four or six hours have often stopped a diarrhœa that appeared fast hurrying the patient to his grave." In Reynold's *System of Medicine*, it is stated in these few words that "Dr. Aitken mentions that salicine, in five grain doses three times a day, has been found very valuable in bad cases with a clean tongue, in which opiates and astringents had entirely failed."

* Read before the Sumter County Medical Society, at its regular meeting in February, 1893.

My attention was first called to this particular use of salicine by an article in the *Medical and Surgical Reporter* (of Philadelphia), from the pen of Dr. J. B. Mattison, now of Brooklyn, N. Y. Regarding the rationale of its operation, Dr. Mattison, in an article read some years later before the Medical Society of the County of Kings (Brooklyn, N. Y.), says that "it admits of a five-fold explanation:

"First, its *tonic* effect, as evidenced by its power in improving the appetite and digestion, and the signal success obtained where there is pre-eminent reason for believing the main trouble lies in a *toneless* state of the enteric mucomuscular membrane.

"Secondly, its *astringent* property, as shown by such promptness of effect in many instances as to admit of explanation on no other hypothesis.

"Thirdly, as an *antiferment* and *antiseptic*, proven by its distinctive power on bacteria and vibrio, and in preventing the reaction of amygdalin and amulsin and of ptyaline on starch. (See Bartholow's *Therapeutics and Mat. Medica.*)

Fourthly, as an *antiperiodic*, rendered likely by its well-known power in this regard, and presuming the fact, which is perfectly fair, that in a proportion of cases not well defined, a malarial element, subtle but sure, is a factor of no mean significance in favoring the long intestinal drain.

Lastly, as an *alterative*, made probable by the fact of a happy influence exerted in many instances where other well-tried tonics, astringents, and antiperiodics have been resorted to in vain."

It can be administered in pill, powder, or solution. Of late years I have been in the habit of prescribing it in capsules, as being the most pleasant mode of administration. To adults I give it in doses of five grains every four hours; to children one-half to two grains, according to age, in sweetened water or milk. I have, however, found it more serviceable in cases of adults than in those of children.

I will now ask your attention to a brief review of several cases, illustrative of the treatment recommended.

My first case was that of a young man who had been attending college in an adjoining State. He was there affected with a diarrhœa, which assumed a chronic form. For several weeks he was treated, but not improving, he was advised by his medical attendant to return to his home,

where he could receive every attention, particularly in the way of diet. He came home and placed himself under the care of a competent physician here. Months passed away without any permanent improvement. He became weary and disheartened, and looking on life as a burden, and health as something ever in the future to be unknown, he called at my office to place himself under my care, with but a very faint hope for brighter days. I found, upon enquiry, that he was having from eight to twelve evacuations during each twenty-four hours, generally watery in their character, but occasionally a little blood and mucus. He told me that all the remedies commonly employed in these cases had been faithfully tried without success. Realizing that it would be useless to try again what had already failed, I determined to treat the case with salicine; so I prescribed—

R_y—Salicine ʒij
Syrup..... q. s.

M.—Divide into pills No. 48.

Sig.—Two to be taken every four hours.

And I directed a continuation of sulphate zinc injections that he was already using. On the third day he called to report improvement; continued medicine as before, and in one month's time he pronounced himself entirely well.

This case, when I first saw it, had been going on for nine months, and I made no change whatever in my treatment from the first prescription. His diet was of light, easily digested food, avoiding meats and green vegetables. After an absence of some years, this gentleman, now a prominent Presbyterian minister in one of our Southwestern States, visited his old home last summer, and, in a pleasant visit I had from him, he told me that he had never had the slightest return of his old disease.

It was on the 4th of August, now some years ago, that a gentleman called and informed me that a lady from a neighboring town, some thirty miles distant, would, if possibly able to travel, arrive on the evening train on the 6th inst. for the purpose of placing herself under my care, and also hoping for benefit from a change of air and scene, and I was requested to see her as early as possible after her arrival. Accordingly, on the evening of the 6th, I called at the residence of Mr. — and found the patient, Mrs. —, an object pitiable, indeed, to look upon. From a beautiful,

gay, and fascinating woman, she had become changed to almost a skeleton, with wan looks, her eyes encircled by dark rings that gave, in contrast to her otherwise pale features, a truly ghastly look. Reclining upon a sofa, with the soft light falling upon her attenuated form, she looked as if grim death had, indeed, as she declared, claimed her for his victim. She told me that for six months past, she had been suffering from chronic diarrhœa of a most obstinate nature. Her medical attendant (an accomplished gentleman and physician) had, during the course of the treatment, used various remedies without obtaining any permanent benefit. Her bowels acted from twelve to eighteen times during the twenty-four hours, very watery, and occasionally passed a little blood; the tongue was clean; no appetite; no tenderness over the bowels, and but little pain at any time; but the constant drain upon her vital powers was gradually, but surely, wearing her life away. Diagnosing this as a case, not so much of an inflammatory nature as of a want of tone in the muscles and lining membrane of the bowels, I prescribed—

R—Salicine..... ʒij
Syrup..... q. s.

M.—Make 48 pills.

Sig.—Take two every four hours, with mild sulph. zinc injections morning and evening.

Being despondent, I endeavored to cheer her by anticipations of a happy return, in health and strength, to the bosom of her family and the caresses of her little ones. On the fourth day there was decided improvement, there having been but two or three evacuations during the day and night, and these of a more natural character. At the expiration of a week, without any other medicine, with the exception of a few doses of compound tinct. cardamom for the relief of flatulency, she was able to walk about the house, her bowels acting but once during the twenty-four hours, and that action normal in color and consistency. Ordered the pills now to be taken only four times a day. Health and strength returning at the expiration of two weeks from the time of my first visit, I was able to pronounce the case as having reached a successful termination. Directed, however, that the pills be continued three times a day for a week. I heard frequently, for several years, from this case, and there never was any return of the disease.

The last case that I would ask your attention to, is that of a gentleman—a business man of our city—who several years ago was taken with diarrhœa, the first of June. He

placed himself under the care of an experienced physician here, who pursued the most commonly approved treatment used in these cases, changing from one remedy to another, without any benefit resulting, until the 16th of August, when the patient decided to take a trip North, in the hope that change of air and scene would be of advantage in aiding to restore his much broken health. He remained in Lowell and Worcester, Mass., under medical treatment until the first of October, when he concluded to come home to die.

I saw him on October 5th, the morning after his arrival, and his condition was certainly very unpromising, his family thinking there was no prospect for recovery. He was greatly debilitated, barely able to walk from one room to another, being compelled by weakness to occupy a recumbent position the greater part of the time; was extremely emaciated, feet and legs swollen, very little appetite, and having from *twelve to twenty* evacuations daily, some watery, others small, with discharge of mucus mixed with blood. There was no considerable amount of pain, and but slight tenderness upon pressure over the abdominal region. Considering this as a case rather of want of tone in the muscular and mucous portion of the bowels than of decided inflammation, I directed him to take, in pills, five grains of salicine every four hours, and small sulph. zinc injections morning and evening, with such light diet as would agree well with him. There was improvement from the *third day*, and on the 23d of October—*eighteen* days from the commencement of the treatment—I dismissed the case *cured*. This gentleman is now living in our city, and has never had the slightest indication of a return of the trouble.

I have intencionally selected cases to report that came under my care several years ago, rather than those of a more recent date, that the permanency of the cure might be fully established.

To those who have not already made use of this remedy, I would earnestly advise a trial of it in the next *obstinate* case of chronic diarrhœa coming under their charge, feeling assured that, as a tonic and astringent, it will hardly disappoint them, but the rather cheer their way by bringing health and strength to the sufferer and a measure of satisfaction to their own souls at having been the means, in the hands of a higher power, of rescuing some loved one from a life of continuous despair, or, perhaps, an early grave.

ART. VI.—The Value of Alterative Tonic Treatment.

By W. THORNTON PARKER, M. D., of Beverly, Mass.

MEMBER OF THE AMERICAN MEDICAL ASSOCIATION.

A recent editorial in one of our leading medical journals, makes complaint that medical men of to-day, write old-fashioned scientific (?) prescriptions less, and depend more largely upon what some of the most respected teachers term proprietary medicines. This is true enough, and undoubtedly there are just grounds for complaint against those careless and, we might say, thoughtless ones, who are well satisfied to have others to do their thinking for them. We might also complain that the days of the practical botanist among our practitioners is passing, or has actually passed, into history. Up in the attics of our medical ancestors, with the unused spinning- and flax-wheel, we find the heavy iron mortar and pestle, which did good service in the forties and thirties, and prior to half century ago.

Those good old days and good old-fashioned times, when men led "laborious lives," have very gradually departed. Laborious days remain, however, and there is plenty of wearying labor.

The doctor of the present era spends little time in the field searching for botanical specimens, and still less in wielding the heavy pestle. He places more and more dependence upon the skill and integrity of manufacturing chemists, and that confidence has certainly not been misplaced.

In our country, pharmaceutical preparations are more scientifically prepared, and nowhere more convenient for physician's and patient's use. Our surgical dressings, plasters, etc., are justly in the lead, and our extracts, elixirs and special preparations are simply unequalled elsewhere. In nutrients, we have the best preparations obtainable. Besides the necessary supplies referred to, we have some combinations of standard remedies skillfully manufactured from the purest drugs obtainable, such as the "three chlo-

rides elixir" (R. & H.) As we look over our case-books, we find certain ills more common to patients than others, and these are repeatedly requiring prescriptions. Briefly stated, we may mention general debility, malarial diseases, tuberculosis, catarrhal diseases, anæmia, chronic constipation, rheumatism, dermatological diseases, scrofulous disorders, syphilitic diseases, etc. However much we may sneer at regulation remedies and plead for a variety in prescriptions, the fact remains the same that every physician has some favorite prescription, and the more successful practitioners rely upon the favorite prescriptions more and more. The ancient hieroglyphics and wise Latin mysteries on prescription blanks are fast becoming obsolete.

Prescriptions are, generally speaking, very simple affairs to-day, and they signify progress and general improvement, although some of the old heroes of shot-gun prescription fame make loud but feeble efforts to stay the onward march of non-progression. The time is not far distant when the old-fashioned prescriptions will be found only in dust-covered volumes of forgotten dosings.

The "three chlorides elixir" (R. & H.) is well worth our careful attention. We have in it an admirable accessory for treatment. The iron is given a peculiarly favorable form for assimilated dosing to nourish the oxygen carriers of the blood. The mercury is an admirable adjunct in the treatment of strumous and tuberculous conditions, whilst the arsenic controls the malarial poisoning and asserts itself as a tonic. The formula contains in each fluid drachm :

Protochloride iron	$\frac{1}{8}$ gr.
Bichloride mercury	$\frac{1}{128}$ gr.
Chloride arsenic	$\frac{1}{280}$ gr.
Elixir calisaya alkaloids.	

We have already mentioned the indications for the use of the excellent preparation, but our own record book shows some cases worthy of note. Among them are cases of chronic rheumatism, greatly relieved by its use; as also cases of chronic eczema of long standing, chlorosis, anæmia, and chronic malarial poisoning. In the latter, the remedy

seems especially desirable where the blood has become seriously diseased by the continued poisonous influence of the malarial action.

In syphilitic diseases the preparation is positively of the first importance, and needs very little recommendation in this direction. I believe that it is desirable to treat all cases of gonorrhœa with the foregoing alterative formula. The system is without doubt more or less influenced for harm by the reception of this poison, and the "three chlorides" (R. & H.) acts powerfully for good, either during or after the attack.

We find in general practice in the cities, especially among our foreign patients, many cases where the Elixir is indicated. In the increasing number of skin diseases, which the American physicians are called upon to treat, the "three chlorides" will be found to be about the best internal remedy obtainable. In our own experience we have been able to use it with pregnant women without any disastrous results; on the contrary, it has seemed to us that any tendency to miscarriage has been diminished by the use of the preparation.

Without wishing to write too fully on the subject, we may conclude by asserting that the preparation is a fortunate one, and will win its way steadily into professional favor. It is a remedy par excellence as a tonic in the treatment of chronic constipation, and this fact alone makes its advent into our therapeutical armamentarium of great value.

It has been recommended in cystitis, chorea, and other diseases of which we have had no means of testing its action. In epileptic anæmia it is well worthy of trial.

A valuable combination of uniform strength, elegantly prepared, and at a reasonable cost, is just what our busy general practitioners need, and will undoubtedly appreciate

Wm. R. Warner & Co's Parvules are the *ne plus ultra* of medicines, as far as our present knowledge goes.—F. W. JONES, M. D., Ipswich, New Hampshire.

ART. VII.—*Cholera Asiatica*.*

By JOHN K. PATTERSON, M. D., of Lynchburg, Va.

Geographical History.—*Cholera Asiatica* has its habitat in Hindoostan, in the Province of Bengal. From the delta of the Ganges to the base of the Himalayas, and from Burmah, on the east to the northwest provinces, it is constantly endemic. Not until this century was it found outside of India. On its outbreaks, it always starts from Bengal by the routes which commerce or pilgrims take, never traveling faster, either by land or water, than a man, and spreads itself at varying intervals of time over the civilized world.

Epidemic Record.—*The first visit to our shores* was made in the year 1832, when it landed at New York and at Quebec, and stopped not till it reached the verge of civilization—the military posts at the headquarters of the Mississippi. In 1835 and '6, we had another epidemic. In 1848, it entered the port of New Orleans, and accompanied the Argonauts of 1849, to the furthest bounds of California. There was an epidemic again in 1854; another in 1866-'67, and still another in 1873, which is the last. Several times since then it has been estopped at our very gates by an efficient quarantine.

In the Eastern Hemisphere, it generally travels into Russia by a northwestern route, through Afghanistan and Persia, skirting the shores of the Caspian—or easterly to China and Japan—or by way of the Red Sea to Egypt, and thence to France, Spain, Italy, Turkey, and the various countries that border on the Mediterranean. "It has never invaded any inland town or country without having been brought thither from a point already infected." (*Stillé*, p. 34.) In 1883, it appeared in Egypt—the sixteenth epidemic since the beginning of this century—and, from the 22d June to the 1st September, it destroyed 50,000 lives. Kinglake, in his fascinating *Eothen* (p. 289), tells us, during his stay in Cairo, the deaths reached as high as 600 daily. He did not

*Read before the Lynchburg Academy of Medicine, at their regular meeting, March 14th, 1893.

hear of any instance in which a plague-stricken patient had recovered. "The howl seemed to be actually *running* along the street." Toulon and Marseilles suffered a loss of 2,600. The people of the village Bezières were so panic-stricken, that, headed by their mayor, they drove off and stoned the refugees from Marseilles. In Spain, the ports of Huelva, Cadiz and Agamonte were infected.

Comma Bacillus Discovered as Cause.—About this time, the governments of many countries appointed commissioners to investigate the cause, progress, and proper prevention and cure of cholera. France sent Pasteur's ablest assistants, Drs. Thuillier (who fell a victim to science), Strauss and Roux; Germany, Drs. Koch, Gaffky and Fischer; England, Dr. E. Kline and associates; and later, the United States sent Dr. E. O. Shakspeare, of Philadelphia. These bestirred themselves to do their whole duty. They went to Egypt first, and afterwards to India. The outcome was, that in this year, 1884, Dr. Robt. Koch, of Berlin, discovered the *comma bacillus* to be the essential cause of cholera.

Definition and Description.—Cholera, then, is an epidemic disease, caused by the comma bacillus, and characterized by transudation of serum into the bowels and stomach, usually with copious purging and vomiting, cramps, algidity, cold breath, shallow, oppressed respiration, a sluggish circulation, lividness of the lips and tongue, a craving thirst, suppressed urinary secretion, a peculiar voice, a strange odor of the body, an appalling countenance, with a tendency to fatal collapse or reaction, and secondary fever of a typhoid character. Mild attacks are called *cholérine*; and when of a '*foudroyant*' character, they are denominated *cholera sicca*.

The *bacillus*, or rather spirochæte, is about half size of the bacillus tuberculosus, and shaped somewhat like the punctuation mark ?. It is endowed with the power, under favorable circumstances, of rapid multiplication, both within and without the human organism, being readily transportable from place to place. It is never absent in a case of cholera, and it is never present in any other disease. The bacilli are found innumerable in the intestinal discharges. Koch

says (*Shakspeare*, p. 453): "For the spread of the infective material, the main condition is, that the germs should remain moist; for, as soon as they dry up, they lose their activity (*id.*, p. 464). They thrive best at a temperature of from 86° to 104° F. Under 60° F., their growth stops altogether. They stop growing at once if deprived of air. In cultures, they grow extremely rapidly, their vegetation reaches a climax; and, finally, they are supplanted by another bacilli (p. 463). They cannot pass the stomach, whose normal acid juices destroy them, at least, in animals."

The Susceptible—Media of Infection, etc.—Of those exposed to cholera infection, only a fraction fall ill. In these latter, we must suppose, there exist digestive disturbances, gastric catarrh, etc., which allow undigested masses of food to be carried along with the bacilli quickly into the upper bowel, whose contents have an alkaline reaction, in which they grow and multiply with an enormous rapidity. It is well known that most of the cholera cases happen on Monday or Tuesday—days which follow excesses in eating and drinking.

From the behavior of the comma bacilli, it may be asserted that a high temperature is associated with the spread of cholera. Even the prevalence now of cholera in Russia, at mid-winter, anomalous as it may appear, proves the rule true, for the Russians are in the habit of maintaining a summer temperature in their dwellings by means of artificial heat. Their huge stoves, too, hinder ventilation. Water is the main channel through which the cholera infection is spread. All the primary lesions affect the digestive—never the respiratory apparatus. A very small portion of cholera discharges infects a very large body of water, and renders it infectious. Healthy stomachs are cholera-proof.

There is but one way to contract cholera, and that is, by swallowing the germs, and having them to run the gauntlet of the destructive stomachal juices in safety. The poison is not carried in the air to poison those who breathe it. It is not capable of being inoculated into the blood. Those who take proper precautions need have no fear of

contracting the disease. The cholera germs are poisonous plants, and may be as thoroughly eradicated as any weed that grows in a farmer's pasture. The cleanly and the temperate need not fear even contact with those afflicted with cholera.

" Bake or boil your cholera germs,
Cook, at least, a minute;
Boil your water, likewise milk,
Water may be in it.

* * * * *

Eat no food, too stale or raw,
Serve it, fresh and hot;
Germs succumb to heat alone—
Send them all to pot."

Sanitation and Hygiene.—Sir Spencer Wells has an article on the prevention of cholera in the *Forum*, for February. Three points, which he especially insists on, are: the value of national quarantine, the importance of a pure water supply, and the necessity of absolutely destroying by cremation the bodies of those who die from contagious or infectious diseases. He believes in absolute isolation of the sick, and the destruction, not merely of their soiled clothing, but their bodies as well, should they perish from the disease. It is useless to detain the well who have had no contact with the sick. In impure water, the cholera germs are multiplied with almost inconceivable rapidity; and the absolute necessity of excluding these germs from water, which, subsequently, may be used for drinking, cooking or bathing purposes, is urgent. Whether by washing infected clothes, or by the drainage from infected discharges, or from the bodies of patients, who have been buried, the water of any locality is liable to become seriously infected, especially if it is already impure. And yet, it can be so excessively impure, that the comma bacilli cannot live in it.

Disposal of Dejections, Clothing, etc.—When a person is attacked, evacuations should be disinfected immediately. The dejecta and the vomited matter should be passed into a vessel, containing a quart of a strong solution of carbolic acid—one part to twenty water—and, immediately after the evacuation, enough of the disinfectant should be added to

make the whole quantity equal to the bulk of the evacuated material. The whole should then be gently stirred, and afterwards allowed to stand for twenty minutes, when it should be emptied into a pit, containing unslacked lime, and be immediately covered by a quantity of unslacked lime. If this method be impracticable, the disinfected evacuations should be emptied into a large earthen vessel, containing a quantity, equal to their bulk, of a solution of bichloride of mercury—one part to 1000—and stirred thoroughly therein. After remaining there for an hour, they may be emptied into a drain which leads to the sewer.

The clothing of the patient and the soiled bed linen, immediately after removal, should be thoroughly soaked for an hour in a large quantity, more than sufficient to cover them, of a 1 to 20 carbolic acid solution, or they should be subjected to the prolonged action of boiling water or steam. The anus and hands of the patient, after a evacuation, should be washed with a 1 to 10000 bichloride solution, and the mouth should be washed with water, slightly acidulated with sulphuric acid. After handling the patient, the hands of the attendants should be washed with the same weak bichloride solution. Under no circumstances should any one eat in the same room with the sick. No person who has been in direct contact with the sick, or with any of his personal effects, should eat without first thoroughly cleansing and disinfecting the hands. *Where disinfection of this character is thoroughly accomplished, it is impossible for the infection of cholera to spread beyond the person attacked.*

Prophylaxis—Those in health who are exposed to infectious cholera, should carefully avoid whatever may disturb the functions of the stomach or bowels. They must be temperate in all things, especially in eating and drinking. They must be regular in their habits, and eat no indigestible food. Strong, aperient medicines, and, above all, *salines* are to be eschewed. Carefully guard against exhausting work or exercise. Keep the functions of the skin normal. It is well to envelope the abdomen at night with a broad band of flannel, so that during the restlessness of sleep the

cutaneous surface may not be exposed to the direct action of the air, and revulsions of blood to the internal organs may be prevented. For the same reason, the body should be protected from draughts by the wearing of seasonable clothing during the day time. Cold baths should not be taken. The surface of the body should be sponged occasionally with tepid water, and afterwards thoroughly dried by vigorous rubbing with a coarse towel. Avoid large draughts of water or milk, *between meals*; for it is a well-known physiological fact, that in the intervals of digestion, the reaction of the gastric juice is neutral, and sometimes even slightly alkaline. Should the imbibed fluid be contaminated, it might easily slip through the pylorus, to find a congenial home in the intestines, with its deleterious germs, uninfluenced and uninjured, by reason of the temporary absence of the to, them, destructive acid contents of the stomach. It may here be mentioned that in dealing with the vibrio of cholera, experiments favor the use of acid drinks during an epidemic, since the microbe is incapable of existing in an acid medium. All emotional excitements must be removed. Observe an equable mind. All food should be recently cooked, and served hot. Attend to the preliminary diarrhœa without delay—by absolute rest in bed—by total abstinence from food for a day or two—by giving small doses of opium with astringents, or such drugs as salol, naphthalin, salicylate of bismuth, etc. Those suffering a “*walking attack*” are as capable, as those most violently attacked, of becoming a centre of infection. All such should be isolated, until the extreme limit of the period of incubation has fully elapsed, which is five days, counting from the commencement.

The rooms that have been occupied by the sick should then be fumigated and the walls whitewashed. There are three methods of fumigation. 1st. With chlorine gas—common salt, 4 oz.; powdered oxide of manganese, 1 oz.; sulphuric acid, 1 oz.; water, 2 oz. The water and acid are mixed together, and poured over the salt and manganese in a delf bowl, which should be placed in a pipkin of hot sand. 2d. With nitrous acid gas—copper shavings, $\frac{1}{2}$ oz.; nitric acid, $\frac{1}{2}$

oz.; water, $1\frac{1}{2}$ oz. Pour the acid and water upon the copper in a small jar. 3d. *With sulphurous acid gas.* Burn 2 oz. sulphur in a metal pot. All apertures should be closed before commencing fumigation. The operator should immediately leave the room after the process has commenced. After two or three hours all doors and windows should be thrown open, and free ventilation established. Rooms should be entirely emptied before being fumigated. Dr. Thorne Thorne's cheap and efficient disinfecting fluid is prepared as follows: Dissolve $\frac{1}{2}$ oz. corrosive sublimate and 5 grains commercial aniline blue in three gallons of water, and add thereto f3j of hydrochloric acid. Preserve in earthenware jars or wooden tubs. Dr. Jones Ferrán, of Spain, by subcutaneous inoculations into man of pure, liquid cultures of Koch's bacillus, claims to have established a considerable degree of immunity from attack and death by cholera. In 30,491 inoculated, out of a total population of 104,561, his tables show that the liability of the non-inoculated to attacks of cholera is 6.06 greater than that of the inoculated.

Pathology.—In the process of development and growth of this vegetable parasite, Koch's comma bacillus, both within and without the human body, a specific poison or ptomaine—a chemical alkaloid, possessing specific, chemical and physiological properties—is produced. Its primary action in the human system is upon the mucous membrane of the alimentary canal, chiefly the small intestine; and the ultimate result is the desquamation, detachment and destruction of the epithelial elements, which form the flocculi of the rice-water stools. The poison being absorbed, produces an inflammatory irritation of the tissues, immediately underlying the epithelia, laying bare the basement membrane, and it finally enters the circulating blood. Here it attacks the red corpuscles, destroying some and altering the function of many, and it causes great disturbance of the nervous system, the gravity of its effects falling principally upon the vaso-motor and respiratory centers.

First, then, we have the evidence of local irritation in the

choleraic diarrhœa, and of systemic infection in the algid state, and the increased alkalinity of the intestinal juices, and of the blood. The abolishment of the normal functions is indicated by the enormously increased transudation from the blood vessels. There is a reverse of absorption; an outward diffusion of the blood—serum, which makes the blood thick and its movements sluggish.

Treatment.—All therapeutists are agreed on one thing in the treatment of cholera, and that is, to give opium in some form to check the preliminary diarrhœa. For obvious reasons, sulphuric acid combined with it is invaluable.

R_y—Acid sulphuric aromat..... ʒv
Tinct. opii deod..... f ʒiij

M.—S.—10 to 20 drops every hour or two in water.

Or, R_y—Acid sulphuric dil..... f ʒiij
Tinct. opii camphorat..... f ʒxiiij

M.—Sig.—f ʒj in water every $\frac{1}{2}$ hour or hour (Bartholow)

In India, chlorodyne is used in all stages of the disease. (For a formula, see *Aitken's Sci. and Prac. Med.*, Vol. I, p. 453).

R_y—Chloroform..... f ʒiv
Æth. sulphuric..... f ʒij
Theraicæ f ʒj
Mucilag. acaciæ..... f ʒj
Morphin. muriat..... gr. viij
Ac. hydrocyanic dil. (2 p. c.)..... f ʒij
Ol. menth. pip..... m. iv to vj

M.—S.—Dose, 5 to 10 minims p. r. n.

NOTE.—Cannabis Indica, atropia, or other anodynes may be added.

Meyer gives for the diarrhœa, a decoction of rhatany, with tinct. cinnamon and tinct. opium; and, for its diaphoretic action, the following mixture:

R_y—Ol. menth. pip..... gtt. j
Tinct. opii..... gtt. xx
Tinct. rhei.....
Tinct. capsici..... āā f ʒj
Sp. vini. gallici..... f ʒij

M.—S.—f ʒj in black tea.

A hypodermatic injection of morphine and atropia is an excellent way to use opium.

At the Moabit Hospital, in Berlin, and at the New Gen-

eral Hospital, Hamburg, *salol* and *creolin* were found useless. Bartholow (Feb. 4th, '93, *Med. News*,) says: "From my observation of the effects of naphthalin in the various forms of diarrhœa, I believe it promises well, since it affects the whole intestinal canal, deodorizes the stools, and restrains the peristaltic movements. It may be combined with bismuth, carbolic acid, and opium, if necessary."

R.—Naphthalin..... gr. xxx
 Bismuth salicylat..... ʒij
 Ac. carbolic..... f ʒss
 Glycerini..... f ʒss
 Aq. chloroformi..... f ʒjss

M.—Sig.—f ʒj every half hour, hour, or two hours.

Rumpf maintains the superiority of *calomel* over all remedies that have been tried thus far in the treatment of cholera. Ziemssen also strongly advocates it. Formerly it was given in massive doses, ʒj to ʒj, to arrest vomiting and secure a change in the secretions; but now it is regarded as the most efficient of the antiseptic remedies. Last year, at the Hamburg New Hospital, the initial dose was 4 grains, and subsequently $\frac{1}{3}$ to $\frac{2}{3}$ grain, every two hours. This use of calomel was kept up during the first and second stages.

Castor oil f ʒij is given in the early stages by Dr. Sansom, and, believing that a septic cause is also in operation, he gives the *sulphite of sodium* in 15 to 20 grain doses for adults and 3 grain for children, in peppermint or cinnamon water. Even when collapse begins it may be given. Sir G. Johnson also renews his former advocacy of castor oil in the early diarrhœa, and it is recommended in the instructions given by the Royal College of Physicians. Many do not agree with this advice, but prefer to check the early diarrhœa by opiates, with or without bismuth.

Homœopathy has its favorite remedy in Rubini's sat. sol. of camphor in alcohol.

Our consul to Marseilles, France, Mr. Mason, in his report to Washington anent the cholera epidemic of 1884, says that the prescription of the late Dr. Valentine Mott, of New York, saved every one, without one solitary exception, who took it. It should be taken early—when cholera-diarrhœa appears:

- R.—Tinct. rhei..... f 5iiss=10 parts.
 Tinct. capsici..... f 5ss=2 parts.
 Vini opii (Sydenham's laudanum) f 5j=4 parts.
 Pulv. camphoræ gr. viiss= $\frac{1}{2}$ part.
 Syrupi æther.....
 Syrupi aurantii cort..... āā f 5xiiss=50 parts.
 M.—Sig.—One teaspoonful in water, p r. n.

The Sun newspaper has widely published the following as the best remedy extant for Asiatic cholera, summer complaints, colic, diarrhœa, and dysentery:

- R.—Tinct. capsici.....
 Tinct. opii.....
 Tinct. rhei.....
 Sp. menth. pip.....
 Sp. camphoræ.. āā partes æquales.

M. Sig.—15 to 30 drops in a little cold water every 15 or 20 minutes till relief is obtained.

Prof. Cantani, of Naples, Italy, suspends from 65 to 100 grains tannin in from $1\frac{1}{2}$ to 2 pints of water or chamomile infusion (of temp 140° F.), together with 20 to 30 drops of laudanum, and 6 to 10 drachms of gum arabic, and uses it as a hot rectal injection. This method of treatment he calls *enteroclysis*, and, with a proper syringe, he claims, and has proved by demonstration, to be able to pass the rectal injection beyond the ilio-cæcal valve. The use of tannin is quite harmless, whereas carbolic or boracic acid injections only irritate the bowel, while sublimate, by coagulating albumen, forms a coating under which the bacilli still flourish. The warmth produced is an essential part of the plan, as it combats the algidity satisfactorily. The London College of Physicians recommend the use of benzoate of soda, or of tannin for the enemata. The most convenient time for an enteroclyster is immediately after an evacuation. At least three or four daily should be used. In the language of Ramello: "If all those who suffer from diarrhœa in time of cholera would at once have recourse to tannin enteroclysters, the grave cases of this disease would be very rare."

In the algid stage, death supervenes by asphyxia, or in the typhoid stage, because, through diarrhœa and vomiting,

the blood has lost a large quantity of its aqueous constituents, and being too much inspissated to circulate properly, excrementitious material—the products of combustion and decay—is retained, or non-eliminated, through suppression of the functions of the kidneys. For this reason, Prof. Cantani practices *hypodermatoclysis*, in order to furnish to the tissues the water, which is indispensable to them. His formula for subcutaneous saline injection is :

R \bar{y} —Pure sodium chloride, 80 grammes... = $\bar{3}$ iiss

Sodium carbonate, 6 grammes..... = $\bar{3}$ iss

Dissolve in 2 liters (quarts) of boiled water at temp. of 100.4° F. to 109.4° F. Inject one pint at a time into the gluteal, ileo-costal, lumbar, or interscapular regions, using a hypodermatic needle, attached to a reservoir of the saline fluid by an India rubber tube. The fluid flows by gravity.

Dr. Sansom's formula is :

R \bar{y} —Common salt..... $\bar{3}$ j

Sodic bicarbonate..... $\bar{3}$ ss

Water (100° to 105° F.)..... Oij—M.

In fifteen minutes one or two quarts can be thus injected. The warm bath, in conjunction, exerts a powerful influence upon absorption also. After the first injection, in the majority of cases, if the internal losses of fluids have not been too great, the circulation is re-established, the eyes open and show consciousness, little by little the lividity of the skin diminishes, and the timbre of the voice becomes normal. In less than an hour a patient, at the brink of the grave, is called back to life. The physician who, with courage and reliance, knows how to use laudanum, tannin enteroclysis, warm baths, and hypodermatoclysis, will have to record, among the victims of cholera, only those unfortunates who, when he was called in to treat them, were already far advanced in the stage of cyanosis and collapse.

Dr. Rieder, of Hamburg, considers intra-venous saline injections to be of the greatest benefit, two to four quarts being well borne. Dr. Linn recommends the following formula :

R \bar{y} —Sodii chloridi..... $\bar{3}$ ij

Sodii sulphat..... $\bar{3}$ iiss

Aq. destillat..... Oj

M.—Sig.—Warm to 99° F., and inject into the saphe-nous vein of the leg.

Dr. O. Silberman (*Deutsch Med. Woch.*, Sept. 8th, 1892,) points out that, owing to the stagnation of the thickened blood in the veins, it is better to inject the saline fluid into the arterial system in a manner similar to arterial transfusion, as introduced by Landors and Ungar.

Dr. C. Barth (*Idem.*, Sept. 8th, 1892,) utilizes the absorbent surface of the mucous membrane of the bladder for the introduction of water into the cholera organism.

For the thirst, Dr. Cantani allows small quantities of water or ice, old red wine, champagne, or lemonade made with lactic or hydrochloric acids. In the Hamburg epidemic, ice water was given "*ad libitum.*" So also were tea and coffee (without sugar), and seltzer water, of the latter some taking six pints during the day.

For the vomiting, Dr. Linn recommends champagne or cognac in tablespoonful doses every hour, or menthol in four grain doses.

For the cramps, bags or bottles of hot water are recommended, or sand with dry friction, or rubbing with camphorated liniments, or flannel bandage wet with turpentine and warmed with a hot iron. Dr. Sansom gives inhalations of chloroform vapor, alternating with inhalations of amyl nitrite. Bartholow (*Med. News*, Feb. 4, 1893,) says the effect of chloral is highly satisfactory. The pain ceases at once, the pulse rises, and the breathing gains in depth and volume. When combined with morphine and atropine, it is of still greater value. The following is a suitable formula for hypodermatic use:

R̄—Chloral hydrat.....	ʒiij
Morphin. sulphat.....	gr. j
Atropin. sulphat.....	gr. ʒ
Aquæ chloroform.....	
Aquæ puræ.....	āā fʒss

M.—Sig.—20 minims (equal seven and a half grains) repeated in ten minutes, and subsequently p. r. n.

To dissolve two drachms of lactic acid in a quart of sweetened water, and take a wineglassful every two hours, has high recommendation from many, when the stools become choleraic.

In last year's epidemic at Hamburg, the *per-iodates* were employed with marked advantage and decrease in the mortality. There are two principal drugs used—the crystals of periodate, which are powdered, and a *periodate of iron*. The latter is used where an extra strong nerve or cardiac stimulant is demanded, and where there are severe neuralgic symptoms. The former is used in several ways: First, as a powder to disinfect the alimentary tract; second, as a plain water solution, prepared by boiling, and used as a beverage to wash out the stomach in severe vomiting, which it checks from within, a few minutes to an hour or two, just so soon as absorption takes place. Again, it is used for *transfusions under the skin*, or, in collapse, into a vein for restoration of the suspended circulation. And again, an acid solution stimulates the liver and kidneys and gall bladder, promoting a free secretion of bile. The effect of this treatment is very marked and speedy.

In a case of collapse, with all the severest symptoms present, the patient is put upon the bed, and copious draughts of the *per-iodate* are given, and repeated, until a sufficient quantity is retained. Meanwhile, one or two quarts of the transfusion solution are run under the skin, and in about fifteen minutes the fluid is absorbed, and the pulse and the heart beats return. Recently, Mr. Weaver gave a demonstration of the chemical and physiological action of the *per-iodates* before the hospital staff, and several distinguished visitors—bacteriologists. Several cases were admitted into the ward. Practical illustrations were given of the new method of physiological examinations of new patients, and of those who had been under treatment for some days. From the new patients, Dr. Cornel (Prof. Koch's confidential assistant) showed the presence of swarms of cholera bacilli, possessed of very active movements when shown under the microscope magnifying 1,000 diameters. From the patients that had been under treatment for some days, neither toxines nor bacilli could be obtained. From experience gained in the treatment of cholera, Mr. Weaver is of

opinion that the cure of the disease necessarily implies its prevention also by the same means.

It may be here remarked that caffeine has been used with success for its cardiac stimulant and diuretic effects. As to the feeding of a patient, whose alimentary canal is deprived of its epithelial lining, and, in consequence, in a condition of great irritation, the less given, even of such a bland fluid as milk, the better. Carbonic acid water, or apollinaris water, or a moderate quantity of iced champagne, is about the utmost indulgence that can be allowed.

Cholera is among the most malignant of all diseases. The deaths average 50 per cent., taking one epidemic with another. Judging from last year's history in Hamburg and elsewhere in Europe, it seems our advanced knowledge as to the cause of cholera has but little advanced our therapy. Preventive medicine and sanitation have lessened the mortality rate immeasurably. Experience teaches us that success depends on the prompt and early treatment of the diarrhoeal stage. After this has passed, the comparative value of the different methods and individual remedies is uncertain. The ptomaine is the poison which works so much mischief. Parasitocides and strong antiseptics can kill alike both host and guest. Now, if we could destroy the yeast plant, as Stillé remarks, by putting a stop to fermentation, we might entirely prevent the formation of alcohol and kill the curse of drunkenness. Yet, who is there that would treat a man dead drunk, or suffering from delirium tremens, exclusively by means of the agent employed to destroy the yeast plant? It is a case analogous to treating cholera by means of those agents alone which can kill the cholera microbe. The present state of our knowledge is somewhat like this: We know how to prevent cholera with absolute certainty. We know how to cure it with absolute uncertainty. In short, medicine is not as yet an exact science.

ART. VIII.—The Special Influence of Alcohol—The Mind.

By T. L. WRIGHT, M. D., of Bellefontaine, O.

In pursuing our inquiry respecting the effects of alcohol upon the human organism, we pass to a phase of the subject which treats of its effects upon the mental powers.

The disadvantages arising from the influence of alcohol upon the mind may be divided into two classes: those which have their origin in perverted sensibility, as from physical degenerations; and those which come from incomplete sensibility, as from anæsthesia. But this distinction is more apparent than real, for the reason that, in either case, the operations of the perceptive faculties are confusing and untrustworthy.

The accuracy of the mental apprehension of facts depends upon the state of consciousness when the facts come under observation. In complete anæsthesia, there is unconsciousness, because, sensibility being absent, there can be no perception. In every subordinate degree of anæsthesia, there must be a corresponding degree of imperfection in the perceptive functions. When the nervous system is in a condition of partial anæsthesia, the knowledge of passing events is necessarily imperfect. The incomplete sensibility of the nervous system causes facts to be presented in a clouded manner. Events are enveloped in a mental haze, which renders the conceptions of them undefined and incorrect. When the sense of vision is hindered by atmospheric conditions, as by fog or mist, the appearances are materially changed from the actual situation of surrounding objects. Not only are the outlines indistinct and deceptive, but things appear to be placed in such relative positions as greatly to deceive the judgment. Not infrequently also, objects seem misshapen, or, perhaps, of monstrous proportions. If then, the disability of a single one of the senses, arising from palpable and well-known causes, may so readily impose upon the mind, it cannot be otherwise than that the incapacity of all the several senses,

through alcoholic anæsthesia, would prove misleading in a great many particulars.

2. Another way in which knowledge is obscured in drunkenness is this:—The facts presented to an imperfect, unstable, and wavering *attention*, such as characterizes the condition of intoxication, are likely to be observed carelessly and in parts only—that is, in a manner fragmentary, and, of necessity, lacking in that comprehensiveness and unity that is essential to a truthful appreciation of them.

3. The faculty of attention is the one, of all others, that worries and frets the man of neurotic constitution. It exacts mental labor of the most exhausting kind, and one of the chief inducements to alcoholic indulgence is the subversion of the elements of attention by the overthrow of ordinary sensibility. The process of attention consists, really, in the individualizing of some object, or thought, or principle. It is a process of isolation and identification. This implies comparison, contrast, the employment of memory and judgment—in short, an extremely rapid and comprehensive employment of all the mental powers—*hoc opus, hic labor est*. This explains why the patient, enfeebled by illness, is not equal to the task of holding the attention in a given direction; and it shows, too, the irksome nature of the enforced attention of the neurotic state.

The mind under the sway of alcoholic anæsthesia is ignorant of its own infirmities. The toxic power of alcohol, operating wholly from within the organism, gives no sign of its impostures. There is no corrective to misinformation; as there may be in the events of enveloping mists and darkness—for example, through the co-operative and conservative action of several of the senses. On the contrary, in alcoholism, the avenues to true knowledge are obstructed, and the senses operate with one accord to deceive. The convictions of a mind under anæsthetic influences are like the delusions in brain disease; for they are not amenable to the correcting influences of comparison and evidence. In the nature of things, they are imperative and unchangeable.

4. Still another of the immediate effects of the disturbance of the nervous functions through anæsthesia, is, the abnormal relationships which the several nervous subsystems, and the several mental faculties, assume towards each other. The elements of thought and reason—sensation, perception, association, memory, and so on—are forced into strange and absurd situations and attitudes. Ideas born of such parentage are evidently of fantastic origin. Thoughts and phrases are strangely arranged, and they appear, for the moment, surprising, uncommon, but also *bizarre*. Listeners are surprised, for, while the notions of drunkenness are possible, they are not composed of the usual elements of thought naturally allied and grouped. The result is, that these unexpected mental exhibitions are frequently accepted as exponents of an exalted intellectual brilliancy and power, although, in truth, they are evidences of mental degeneration, incoherence, and frivolity.

5. The paralyzing influence of alcohol upon sensation, necessarily renders knowledge uncertain and obscure. The judgment is misled. The perceptive faculty is dependent upon the presence and quality of sensation. When the senses are disturbed or impaired, perception is correspondingly affected; and it is disqualified from presenting to the mind facts as they are in the surroundings. The delicate shades and uncertainties and doubts of meaning, that invariably wait upon all human transactions, escape the attention of the drunken man. He is, therefore, ignorant of their existence. As a rule, whatever comes under his notice, possesses the quality of positive fact—of, indeed, demonstration itself. It follows that, as a witness in court, he is bad. While he imagines that he knows the truth, it is impossible that he should know it. He is a dangerous witness from an unsound and mistaken, though honest, positiveness of conviction and assertion. These incapacities are inseparable from the use and influence of alcohol; and even the moderate dram of ardent spirits will, in a certain degree, derange the perfection of the human character in the high position allotted to a sound mind in a sound body.

6. It is not always for excitement that alcohol is taken into the system. Often it is to secure repose; and this repose, in its extended sense, is simply paralysis. In the paralysis of sensation, pain is abated; in the paralysis of the co-ordinating nerve centers, the moral and sympathetic distresses no longer harass the system. The paralysis of alcohol, whatever may be its degree, extends throughout the whole body. It is seen in the motor system through hampered movements, defective speech, and inexpressive countenance. It is apparent in the organs of sense through illusions, hallucinations, and the suspension of the capacity to feel. It may also be perceived in the intellectual faculties, through incoherence and confusion of mental display, and the deformities of the ideal and imaginative creations. It is revealed in the normal sense through the inflow of untruthfulness, deceit, and prevarication.

7. Alcohol is sure to debase and weaken sensibility in every department of the nervous system. The acuteness of the senses is not only dulled by alcohol, but their completeness otherwise is seriously impaired. If the objects of the exterior world are pictured upon the mind incorrectly and in unnatural proportions, they cannot be conceived of in their right relations and aspects. They may, however, be mingled in whimsical confusion with each other, and with unrelated and half-formed ideas, through the force of a capricious imagination. Thus, they may lead the mind, bewildered and helpless, into the bogs and sloughs of error and folly.

8. Now, alcohol, through the distorting operations of a nervous system poisoned by it, addresses the mind, through the senses, in the very way herein described. A perception may be presented, for example, that is not a correct representation of anything, but is simply a caricature. The impeded co-operation of the several senses, all imperfect and testifying wrongly, fails to enlighten the mind in regard to the real facts. Hence the ludicrous combinations of the drunken imagination prevail, and provoke mirth; the imperfections and haziness of sensation lead the ideas away from the reasonable and true; while a comparison of the

alcoholic concepts with allied images in memory, produces the most grotesque mental apparitions, attended with no end of silly conceits and nonsense. The drunken man is in a strange and fantastic world. His movements and language betray the awkwardness and helplessness of his situation.

In the newly-drunken man, the influence of alcohol is usually pure and unmixed. The imagination is abnormally volatile, while the mental images are apt to be pleasing, though inconstant and chimerical. But in the secondary stage of drunkenness, all this is changed. The influence of alcohol is now of a complex nature. Other poisons join in dominating the mental powers. Ideas are fixed—no longer buoyant and elusive—and the disposition is sullen and malignant.

The drunken man sees things in false lights. His intellectual capacity is so deteriorated by the toxic power of alcohol, that he is incapable of perceiving the real truth. He is the victim of false pretenses, tendered by senses that have been depraved and perverted by alcohol. The speech of intoxication is full of absurdities and extravagance, because the conceptions of drunkenness are incongruous and immature. The ideas of the inebriate mind are stilted and grown out of rational proportions through the deceptions inseparable from an indistinct sensibility. Under all circumstances, the drunken mind is incomplete and impulsive; yet, in a large degree, it rules nations, makes war, and enacts laws.

9. It is proper to remember, however, the mental aberration of drunkenness does not depend exclusively upon faults of the special senses. To the defects of sensation and perception, there should be added instability and inco-ordination of movement amongst the several great departments of the organism. In order to accomplish the duties of individuality, and complete the impersonation of self, there must be symmetry of function, both in regard to time and purpose, between the three elementary departments of human nature, namely, movement, reason and motive; or, as commonly written, body, mind and soul. This fact comes

prominently into view in every enlightened discussion of inebriety. It is a fact that necessarily follows the disabilities imposed by alcohol upon the senses in their detailed and specific functions. The body is not responsive to mind and will. The mind takes diminished note of the incapacities of the body. The moral faculties cease to sustain normal relationship with the operations of the intellect, and of the physical impulses and sensibilities.

10. The important question arises: Is the individual, under the influence of alcohol, capable of self-control? In considering this question, it will be well to observe the effects of habitual alcoholism on the mind, as compared with the effects of other habitual states under which the mind may be placed. The healthful mind always improves with exercise and opportunity. When habitually active in any rational employment, its aptitude, its skill, strength and quickness increase in its particular line of movement. The mechanic will, in time, cease to be a bungler, and will become an expert; and the same is true of professional life. When the healthy mind finds itself in a wrong position, and surrounded by undesirable circumstances, it not only extricates itself from difficulty through its own efforts, but it prepares, by premeditation, some practical avenues of escape from similar embarrassments in the future. It possesses and employs the power to give efficiency to its plans. The drunkard, humiliated and endangered, likewise determines to avoid in the future his old follies and delinquencies. Yet each season of inebriation is characterized by substantially the same phenomena. There is no improvement or practical change. Be it the first or the last stage of intoxication, corresponding periods in the debauch are attended by like manifestations. In the early season of drinking, the fun, the foolishness, the extravagance are usually the same; while later on there comes into view the same vile propensities, the same rigmarole of curses, the same threats—in fact, the identical baseness of mind that has always distinguished a

similar season of alcoholic excess. The drunken mind never improves. It cannot, for alcohol holds undivided sway over the mental faculties. Alcohol is master, and is in possession. It is absurd to expect the mental faculties to be capable of self-control, when in fact they are themselves wholly under the dominion of alcohol.

11. The condition of consciousness in the drunken mind is a subject of the greatest importance. A clear conception of the nature of consciousness is necessary to its proper discussion in its relations with inebriety. Consciousness, according to Wundt, while a unit, consists also of a unification of parts—of perception, representation, idea, feeling, and volition. The definition of consciousness by Sir William Hamilton does not materially differ from this. It is “the self-recognition that we know, we feel, we desire. Consciousness constitutes—or is co-existent with all our faculties of knowledge—those faculties being only special modifications under which consciousness is manifested.”

If, then, the elements of consciousness are imperfect (as through the disabilities imposed by alcohol), the resulting quality of consciousness will likewise be imperfect. Consciousness, though the principal basis of conduct, is not an infallible guide with respect to right and fact. It is evident that in a condition of the organism where the whole system of the nerve-centres is paralyzed in various degrees, the faculties which are unified in consciousness must impress upon it a nature defective and misleading.

The revival of the senses from the unconsciousness of alcohol is very gradual. The first glimmerings of sensibility are not attended by a right perception of things; and it is impossible to indicate any point in the restoration of consciousness where knowledge is accurate and reliable. A single drink will throw a haze around consciousness, for alcohol tampers with the *data* essential to its brightness and perfection.

“The transition from the physical to the mental is the secret.” The point of junction where the physical movement ceases to be physical—and where mental knowledge

begins—is the delicate and ethereal subject that has absorbed the best efforts of the ethereal mind for ages. To accomplish the highest results in this transference of the functions of the material body to the spiritual and immaterial qualities of the soul, surely demands the aid of the physical organism in its greatest perfection. Alcohol is an insuperable obstacle to this work.

12. An inquiry respecting the influence of alcohol upon the mind would be incomplete without some notice of a nervous state, known as trance. This condition, although quite common in deep drinking, is often induced by very moderate alcoholic indulgence. Alcohol possesses an hypnotic power which is distinct from its intoxicating properties.

Trance, however, is not solely the outcome of the alcoholic influence; although in certain neurotic constitutions alcohol appears to be an exciting cause of it. In alcoholic trance, consciousness is but partially influenced by the material surroundings. Trance is very nearly associated with subjective, or automatic life. It is a condition, too, which may affect the mind after some other neurotic besetment (such as hysteria or dipsomania) is supposed to be cured. In a case of this kind the trance is merely the substitution of one neurotic form for another—there having been no real cure effected. Such interchange as this is liable to be reversed, and a return of the malady in its original form may be expected.

Alcoholic trance is a state of mind wherein the fitness of things, as apparent to common observation, is not clearly noted. It may be that faint glimmerings of common sensibility, mingling with the suggestions of automatic life, would arouse strange incentives, and evoke unconscious motives greatly at variance with those of truly rational experience. It is certain that crimes inexplicable in purpose, are not infrequently perpetrated by drunkards, during the trance state. It is highly probable that imperfections in the perceptive faculties, and inco-ordination in the fundamental departments of the human organism, may unite in producing dangerous and unnatural courses of thought.

13. The benumbing effects of the alcoholic poison extend throughout the whole system. While they depress and modify the mental faculties separately and in detail, they also throw a darkening veil over the mind as a whole; so that it is quite incapable of judging correctly respecting its own situation and relationships. It is difficult to enlist the interest, or to engage the attention of a person when intoxicated; for he is not thoroughly alive to ordinary impressions. Hence the drunken man has a poor conception of the passage of time; for the succession of ideas in the mind, as it may be rapid or slow, gives the usual notion of time. To have the average feeling of time, therefore, a man must have possession of his natural sensibilities. Images and thoughts in the drunken mind thus become fixed—or, as it might be said—stagnant. They are not readily changed; for the formation of new conceptions is hindered by the obstacles to obtaining additional facts for rational contemplation.

14. The wonderful egotism of drunkenness exposes the inebriate to contempt and ridicule. Even the geniality and good nature of new intoxication are intensely selfish. They are manifestations of a morbid grandeur and condescension. Drunkenness is an exhibition in which real weakness of character is contrasted with illusions of magnificence and power. But the deceptions practiced by alcohol upon the egotistic feelings would be amusing, if they were not pitiful. The drinker often becomes impressed with an acute sensitiveness, with respect to his social position as compared with the pretensions of others. He claims emphatically to occupy a station of the highest possible eminence. He demands that all persons shall approach him or his family with deference. It is worthy of note that his punctilio in this matter bears pretty close relationship to the extent of his alcoholic indulgence.

15. A singular impression often comes upon the mind of a person who is intoxicated—the idea, namely, that he is somehow physically invulnerable. His imagination seems to clothe his body in an impenetrable suit of mail. This is

the result of allusion. The sense of feeling is blunted and the mind is thereby misled. A drunken person may therefore be filled with a reckless courage, which is carried to the highest pitch of extravagance. He is moved by erroneous convictions respecting his physical safety, as well as of his bodily prowess. An individual in this state of frenzy is truly "pot-valiant"—a condition well known to everybody. When the inevitable time comes, however, that some respite from liquor is demanded by the outraged organism, the awakening from the fancied security of drunkenness is attended by much nervous inquietude and mental misgiving. The notion of bodily immunity from danger, begins to dissolve and melt away; and so the individual, however high in his own esteem he may have been, may become quite tractable, and admit that he is not a whit better than his neighbors.

In men of intelligence and right feeling, shame and remorse fittingly conclude the unspeakable follies of an alcoholic display.

ART. IX.—Observations on Depressed Fractures and Their Treatment.

By J. H. BROWNING, M. D., of Simeon, Va.

My object in reporting the following cases is not to record operations of my own, for I did not see either of the cases for several years after the injuries had been received; but to recall some of the evils which result from trusting everything to "*vis medicatrix naturæ*."

CASE I.—Mr. H., aged 38, family history free of neuroses; while working at a derrick several years ago, was struck by a guy-rod, causing a compound depressed fracture, four inches long and one inch wide, extending from the bregma downward and slightly backward, on the right side principally. There was profuse hæmorrhage, but no symptoms of concussion or compression. He says he was only "stunned for a moment;" but finding his "skull mashed in," he rode home, horse-back, one and a half miles. The

doctors in attendance dressed the wound, and *left nature to do the rest*. His recovery was rapid, so far as skull-repair was concerned, but ever since he has been the victim of the most intolerable suffering, which is paroxysmal in character.

The principal exciting causes of the attacks are: excitement, exhaustion, heat and loss of sleep. He says: "Sometimes the pain is confined to his head," but in a severe attack, it extends from his "head to his stomach," and then he suffers greatly with nausea. The attacks usually last about twelve hours. He says, he has consulted many physicians and given medicine a faithful trial, without getting the slightest relief, and now thinks of trying a notorious quack before submitting to surgical aid. (A reproof we justly deserve.)

CASE II.—Mr. S., aged 23; family history gives neuropathic tendency; was struck with a rock about three years ago, causing a simple depressed fracture, one and one-half inches in diameter, circular in outline, situated about the stephanion, on the left side. The attending physicians, after consultation, decided to let "*nature take its course*."

He gained consciousness in a few days, and made a slow, but apparently good recovery, with the exception of the embarrassment caused by parophasia. Until some months afterwards, while lifting a heavy weight, he was taken with an epileptic convulsion, and since then has had attacks of epilepsy, at intervals, varying from two weeks to a month.

It is worthy of note that in both of these cases the injury is in the region of distribution of the middle meningeal arteries, and *dural* branches of the pneumogastric nerves. Is it not probable that the symptoms in Case I are due to irritation of these nerves, and if his family history was not clear of neuropathic trouble, he would be victim of epilepsy also?

In dealing with depressed fractures, it is not only the amount of compression the blood clots and depressed bones cause that demands our consideration, but also the amount of *irritation* to the brain and *dura mater* that may result.

In granting that there is "no necessary fatal injury of the brain," we have to acknowledge also, that there is "no pathognomonic symptom, as to extent of injury." There must be very few, if any, cases of depressed fracture, simple or compound, which we are justifiable in trust-

ing to expectant treatment. Indeed, with the undisputed truth before us, that a depressed fracture of the cranium causes either immediate rupture of blood vessels, compression, coma and death, or subsequent extravasation, separation of the dura mater, irritation, inflammation, suppuration and death, in a large per cent. of cases; and, on the other hand, if reparation and organization take place, the patient is ever afterward subject to epileptic convulsions, ending in idiocy, or rendered unfit for the duties of life, from *irritation* of the brain and dura mater—with such facts before us, I cannot see why trephining is not always at once performed, even if exploratory, and elevation or exsection of the depressed bone has been done—thus giving patients a chance to escape the fearful ordeal of symptoms, which, without applying the needful remedy, awaits them.

Clinical Reports.

Large Fibro-Cyst of Uterus—Weight, 76 lbs—Sac, 10 lbs.; Contents: Pus, 66 lbs.

By I. S. STONE, M. D., of Washington, D. C.

The following case merits special mention, although unsuccessful:

A. B., colored, age 38, multipara; sick for only one year according to her statement. She had never been treated for any discharge, hæmorrhage, or, indeed, any ailment. Dr. John E. Walsh accidentally discovered the woman, who had not employed a doctor. He saw her immense size, and urged her to come to Columbian Hospital for operation. She had the appearance of anæmia characteristic of women who possess large ovarian tumors.

After due consultation with the hospital staff, Drs. King and Boveé, it was decided that she had an ovarian tumor. As this was, if ovarian, the only one I had ever seen in my own practice in a negress, an interrogation mark was added to the diagnosis thus made. Its fibro-cystic nature was freely discussed and thought possible on account

of race influence. It was impossible, with all the signs and symptoms presented, to have made a different diagnosis, or a more definite one. Her body measured 41 inches in circumference at the umbilicus; from pubis to ensiform cartilage, 21 inches; and the size of the tumor had caused extensive expansion of the thorax from pressure upwards. Her condition was far from an ideal or desirable one, if we would expect recovery to follow upon a surgical operation. A loud mitral bruit, with traces of albumen in the urine, with general prostration and depression present, marked the case as one of most undesirable character.

Operation was done on March 8th, with Dr. Holmes, of Chicago, Dr. Goggans, of Alabama, Drs. Poole, King, Boveé, and others of Washington, present. Ether anæsthesia. The incision at once revealed a most difficult and trying complication. Large veins in the peritoneum and capsule of the growth. Almost the whole anterior and upper surface of this tumor was firmly adherent. The contents proved to be very offensive pus of green color, and fully eight gallons in quantity. The removal of the tumor occupied one hour, the greater part of the time being required in separating the mesentery from its superior and posterior surfaces. The appendix was about five inches long, and securely fastened to the growth. The pedicle was not larger than the little finger, and grew from the posterior and upper surface. The uterus was of nearly normal size; ovaries larger than normal, and did not require removal. A small fibroid grew from the anterior surface of the uterus and was removed. The small intestine was torn, and required resection, which was done rapidly, but with the full belief that the patient was in fatal collapse.

It is quite possible that the extensive dissection of the mesentery and bowel from the growth on its upper and posterior surfaces caused the delay and shock which carried off the patient in her feeble condition.

The question now comes before me, could the result have been different under any other treatment of the case after operation had begun? Very soon after getting "under way," I found the pelvis free from adhesions of insuperable character. This caused a feeling of confidence that the sac, which was rapidly emptied, might yet be brought out easily after the separation of parietal adhesions, which were firm, and extended from just above the pubis nearly to the ensi-

form cartilage. This separation when accomplished, plainly revealed the still greater intestinal and mesenteric attachments which constituted the main difficulty. To have closed the wound, leaving the patient to die without an attempt to save her, was not my intention; but to arrive at the stage just mentioned, abandonment would be still worse—hence, to complete the operation was the only resource. The very small blood supply from the uterus had probably caused the degenerative change already mentioned. The chief blood supply was from the mesenteric adhesions, and to have simply secured the enormous sac to the parietal peritoneum would not have succeeded as in case of renal or pancreatic cysts. To have been available, this should have been done at the commencement of the operation.

It is often difficult to ascertain at the outset the nature and origin of a tumor. As in the present instance, the very small pedicle and comparatively unimportant adhesions within the pelvis, led me to doubt its uterine origin; and mentally I was trying to reconcile the history of the growth with ovarian, pancreatic, renal, or other growths.

The problem could not be solved until the sac was removed, when it was easily seen to have been of uterine origin, with both ovaries and tubes intact. The uterus was slightly larger than normal, and presented—as did all the abdominal viscera—a marked pallor, owing to the patient's collapsed condition.

I may be criticised for attempting operation upon so unpromising a patient; but when all the circumstances are considered, I think the verdict will be in favor of the course pursued. The only hope of saving the patient depended on quick operation. She would not have long survived had operation been postponed.

In conclusion, I wish to again call attention to the rarity of these tumors and the difficulty of making a correct diagnosis. All authorities agree as to these facts. Dr. C. C. Lee reported nineteen cases in 1869, in eighteen of which operation was begun for ovarian tumors. Dr. Peaslee met with

fully fifty during his life—probably more than were recognized by any other observer. Koeberle says these growths are almost impossible of diagnosis. Baker Brown and Sir Spencer Wells are also on record with expressions of the same opinion. Greig Smith says these tumors are rare, always sessile, and difficult of diagnosis. Thomas mentions illustrative cases showing the impossibility of diagnosis before operation. (*Dis. Women*, 5th ed., page 546.)

Finally, I mention this case because the fibro-cyst of the uterus was larger than any of which I have found record. Sir Spencer Wells and Kiwisch have each reported tumors weighing forty-six pounds. These approach nearer in size the one just reported than any I have seen mentioned.

1504 H Street, N. W.

Proceedings of Societies, Boards, etc.

RICHMOND ACADEMY OF MEDICINE AND SURGERY.

[DR. J. F. WOODWARD, Reporter]

Regular Meeting, Feb. 14, 1893. Dr. Hugh M. Taylor, President, in the chair.

Reflex Vesical Irritation.

Dr. Jno. N. Upshur read the paper on this subject—basing his remarks chiefly upon reflexes more commonly found in women. He dwelt especially upon those relating to true uterine lesions—where a neurotic element exists.

Mr. Hugh Blair thought the causes of these reflexes very obscure, and suggested that the often spoken of failures of treatment in these cases were due to an oversight. As an analytical chemist, he presented some interesting ideas concerning the deposits usually found in these and other bladder troubles—referring more especially to phosphatic urine—and claimed that, to sterilize urine, an alkaline condition was necessary, rather than an acid. He thought the deposits often found on the mucous membrane of bladder were, as a rule, phosphatic, and not uric acid, and that the alkaline condition of the urine more often produced cystitis than

acid urine. He always found the phosphatic urine of an offensive odor, and phosphaturia generally indicated depression and debility.

Dr. Landon B. Edwards remarked that he was decidedly in favor of giving therapeusis a trial, rather than rush headlong into surgery—as is the too common tendency of the day—simply because some eminent surgeons had brought out brilliant results from some few well-selected and maturely studied cases. Surface lesions about the neck of the womb, as also endometric, are frequent causes of bladder reflex troubles. Many such cases are readily curable by local treatment, in conjunction with constitutional remedies. The most commonly serviceable of local applications is boracic acid, as he had learned from Dr. Wenzel, of Milwaukee. In all such uterine conditions, accompanied by vesical irritation and consequent reflex troubles, pack the vagina full of boracic acid, retain with a tampon or vaginal plug of cotton, and let it remain for three or four days, and then re-pack. Where there are abrasions, he also often uses iodol locally. This treatment, though simple, he had seen act like a charm in many cases. As suggested by eminent practitioners the world over, suspicious cases of latent gonorrhœa should not be overlooked as a cause of many of these reflexes. Constitutionally, there is no one better uterine alterative tonic for uterine diseases than Fowler's solution combined with minute doses of bichloride of mercury. Of course keep the bowels open by some such agent as cascara sagrada.

Case of Appendicitis—Death.

Dr. W. W. Parker reported a case—child six years old—with what he at first thought obstruction of bowels because of nausea vomiting and constipation, with colicky pains, uncontrollable by usual remedies. Pulse feeble and quick; skin bathed in clammy sweat. In about forty-eight hours, however, the little patient began to improve, and was thought out of danger. About ten days later, he was called again, when all of the former symptoms were exaggerated, and there was strong suspicions of appendicitis. Abdomen distended in right iliac region, and collapse imminent. The peritoneum was opened, and a large quantity of pus let out; flushed the cavity, and awaited the result. The child died shortly afterwards. The doctor wanted to know whether or not he should have continued his operation, as the first incision was only exploratory.

Dr. Hugh M. Taylor thought the case reported was plainly one of appendicitis—acute for the first few days, then subacute or quiescent; and again acute, and finally ending in suppurative peritonitis and death. The result showed that it was a case for operative interference with fair prospect of success in the early stages of the disease; but a very much lessened chance of the operation if delayed. No problem in the practice of surgery was more difficult of solution, he thought, than that of ascertaining when to operate in appendicitis. With no pathognomonic symptoms, we have to judge each case upon its own merits; for it seemed to him that every case he saw presented some unique features. One thing was beyond all question settled, and that was that operative interference is urgently called for in every case as soon as the chain of symptoms point to the existence of suppuration.

Dr. Upshur thought it well to distinguish between idiopathic and traumatic appendicitis, as the latter always called for surgery, while the former generally did well under drugs. It was a doubt in his mind when to operate, as salines, leeches, and poultices, had done well in his hands. Much swelling, with sense of throbbing and collapse, and with other symptoms exaggerated, would seem to suggest the use of the knife.

Dr. Jacob Michaux referred to fifteen cases that had come under his care, with complete recovery without the use of the knife. This was, in his mind, good evidence that conservatism in these cases would, in a majority of such cases, prove successful. He wished to emphasize the benefits to be derived from drugs and prompt attention.

Dr. Jas. N. Ellis thought he had had occasion in the last ten days to realize the practical force of what had just been said concerning the necessity of more definite knowledge as to *when to operate* in appendicitis. About two weeks ago, he attended a young lady, æt. 22, who exhibited all the symptoms we have learned to associate with appendicitis—viz: chill, nausea and vomiting, constipation, slight fever, rigidity of abdominal muscles of the affected side, elevation of right thigh, irritable pulse, pain and tenderness in right iliac fossa referred to by McBurney. He controlled pain with hypodermics of morphia, and ordered teaspoonful of saturated solution of sulphate magnesia every hour, and applied a four-inch blister over the cæcal region. The magnesia was followed by two ounces of castor oil. Subsequently, poultices were applied to the blistered surface; but

the constipation continued, and any further attempt at purging seemed to increase the pain. Contemplating an operation, he called in consultation Dr. I. H. White, who confirmed his diagnosis, but advised a little more time. During the next four days, while Dr. Ellis was reproaching himself for jeopardizing the life of his patient by not operating, the symptoms began to change, and in seven days she was out of danger. With such an experience, he was inclined to think that so grave an operation is hardly justifiable until there are very conclusive evidences of pus formation.

Regular meeting, February 28, 1893. Dr. W. S. Gordon, Vice-President, in the chair.

Subject for evening—

Abuse of Astringents in the Treatment of Catarrh.

Charles M. Shields, M. D., Lecturer on Diseases of Eye, Ear, and Throat, referred more directly to acute nasal catarrh, or "cold in the head,"—when we have feverishness, fullness, and discomfort of the head, accompanied by watery mucous, or muco-purulent discharges as more general characteristics. He argued that the idea of decreased discharges from the nose in ordinary catarrh was rather paradoxical; that the original, in Greek, means to flow down; hence the general opinion that there is always an increased flow. This apparent increase in mucous secretions is not real, but the result of a diminution of the watery constituents of the mucus, thus rendering it more viscid and tenacious, whereby its presence is more easily detected. The lesson taught by Aschenbrandt and Kayser, that from 12 to 14 ounces of fluid are necessarily absorbed by the air passing through the nose, to bring it to required degree of moisture saturation, showed clearly that the chief function of the nose is not olfaction, but respiration. The combination of turbinated-tissue serum and muciparous secretions resulted in a consistency wherein the watery parts and solid parts are as 93 to 7, which, under vaso-motor control, adapted itself so nicely to the supply and demand of dry and moist atmospheric conditions that we were, as a rule, not conscious of its presence in a healthy nose. But when, from some intrinsic or extrinsic cause, the solid matter is increased at the expense of the fluid, and serum exosmosis interferred with, what would have normally passed off by evaporation becomes more or less inspissated and acts as a local irritant to mucous membrane. This is the condition of affairs wherein the

damaging effects of astringent sprays and powders are exhibited, which, if properly used in the very onset, when lack of stimulation limited secretion, and in the so-called purulent form more common in children, could do no special harm, and might do some good, while their more general use as powders and liquids hardened and excited the already hypertrophied glands, limited serum exosmosis, and rendered the normal supply more tenacious. He thought that if his experience in this line had done him no other service, it had made clear to him that the ultimate result of continual use of astringents in the nasal cavity was harmful rather than a benefit. In his paper he made exception in the use of caustics properly used in shrinking hypertrophic spots. He thought some of the most serious results of continued use of these drugs were mouth-breathing, with all of its dire consequences, loss or perverted sense of smell, as olfaction could only be successfully accomplished when the parts were entirely normal as to size of nasal cavity and condition of mucous membrane; and perhaps the most frequent result was the hastening or actual causation of that *bete noir* of the rhinologist, atrophic catarrh, by rendering the parts abnormally dry. This seemed to him to be the result consequent upon the use of the so-called catarrh cures, put up by questionable doctors and druggists. He did not think it worth while to go far into the therapeutics of catarrh, as a recognition of the danger of the use of astringents and strict adherence to cleanliness, such as weak alterative antiseptic sprays and non-irritant snuffs, generally sufficed to put the nasal cavity in normal condition. Of course, proper calibre of cavity must be maintained by removal of foreign growths and correction of depleted septums.

Dr. Joseph A. White was reluctant to acknowledge that there was such a disease as catarrh. He had many cases referred to him as catarrh; but there were very few of them that he could not refer to other conditions. He could point to astringents as the direct cause of serious trouble in very few cases only; but agreed with Dr. Shields that they were very dangerous drugs to use in nasal cavity, without proper precautions. He did not think the laity as well as many of the professions had a clear idea what nasal catarrh meant, and suggested that the term rhinitis be used instead. The multiplicity of catarrhs seemed to confuse. As to the treatment, he thought it bad practice to try and relieve every deflected septum, but invariably cut away

all spurs, whether anteriorly or posteriorly; for if left, they by pressure set up reflexes that might give much trouble. He always found great relief in these cases by use of alkaline remedies in a "Success Nasal Syringe"; and he preferred this instrument, because with it the entire post-nasal cavity was made accessible. Seiler's antiseptic tablets, warm salt water, weak bichloride solution (1:6000), essential oils, oil eucalyptus as a salve—all of these he had found serviceable. But, to abort and relieve the acute attacks, he used weak solution of cocaine, 1 to 2 per cent., and menthol and camphor, each xv. grs. to ounce of liq. vaseline, or white oil, used as spray or salve, and always took special precautions to see that there was no nasal obstruction.

Case of Reflex Spasm of Œsophagus—Cure.

Dr. Joseph A. White reported the case of a lady, æt 56, suddenly seized with spasm of throat, aphonia, and unable to swallow—attack lasting from 10 to 12 hours. She had had these spells of "small swallow," as she termed it, for many years, recurring at frequent periods. She stooped a little and complained of severe pain in the cervical region, radiating over the right shoulder. He could barely pass the smallest bougie after giving her chloroform. Non-plussed at failure to cause relaxation with chloroform, he put her on rectal injections of chloral, 15 grs., every 5 or 6 hours, and in four days she was apparently well, and the largest sized bougie could readily enter her Œsophagus. He thought the spasm was caused by some spinal reflex, and the case was of special note in that the chloroform utterly failed to relax the muscles of the throat, while chloral acted well in small doses per rectum.

Dr. Thomas J. Moore thought chloral acted as promptly and in same dose by rectum as by mouth; that it was a hypnotic and not essentially an analgesic.

Dr. Edwards thought chloral specially valuable in spasms, and can be safely used as long as the spasm continued, but the safety line of administration is ended when the spasm ceases; that it was not purely analgesic, but if used for that purpose, the small doses should be given.

Occluded Os up to Second Stage of Labor, When Incision was Made.

Dr. W. T. Oppenheimer reported a case of labor, lady æt 17; primipara; pains good; but vertex presentation. No os could be detected when the head engaged at the superior strait, there was a slick, shiny membrane investing the

whole head. He slit up the membrane, dilated and delivered live child with forceps. Child and mother did well. He suggested that some lesion to the neck of the womb after conception had probably caused entire occlusion of os.

Pneumonia.

Dr. Thos. J. Moore said he did not remember a winter when more cases of pneumonia were seen, and thought it depended more especially upon the climate as to its prevalence and mortality; that the further South we go less liable are we to sudden atmospheric changes; hence a proportionate lessening of number of pneumonia cases. More fatal in children, habitual drinkers, and very old patients, on account of lack of physical resistance. As to treatment, he thought we try and do too much; that little medicine was needed; success depended on strict hygiene, even temperature, and cleanliness; silk jacket, padded with lamb's wool or cotton batting, to keep parts warm. Opiates and stimulants are not to be used, if possible, except stimulants are necessary in habitues, old asthenic patients, and in those over 50 years old. He thought he had seen several cases aborted by giving five grs. quinia every two hours at the onset.

Dr. Edwards reported two recent cases, where collateral congestion was very prominent. Pain was relieved in either case by painting side with tincture of iodine. He gives stimulants freely in the latter stages, if patient is weak or resolution is delayed. Thought the coal-tar preparations very serviceable in small doses; also gave digitalis and strychnia. He, however, relied on quinia, and thought he had seen it abort several cases when given in first stages.

Dr. Virginus Harrison had seen twelve or fifteen cases, and found collateral congestion occurred in about 50 per cent. of them. He relieved pain with nitro-glycerin and quinia. Used oil silk jacket and cotton batting, instead of liniments and poultices; blistered in third stage, and used very few drugs.

Dr. W. T. Oppenheimer thought collateral congestion more common than formerly, but did not remember per cent. in his cases. He used oil silk jacket, and blistered in the beginning of resolution in every case. Usually gave a little calomel, but was governed entirely by condition and surroundings of patient as to use of stimulants and opiates.

Dr. Geo. Ben Johnston did not remember ever witnessing such a large number of cases one season as this winter. He

had met with collateral congestion in a large number of his patients; used dry applications to chest, such as the oil silk jacket and lamb's wool; relieved pain with dry cups; occasionally gave morphia and tartar emetic, but avoided aconite, veratrum viride, and all the coal-tar preparations, using quinia instead. Blistered in stage of resolution, and stimulated according to progress of case. The disease is not so fatal in strong young people, but very serious to old people.

Dr. J. S. Gordon held that in pneumonia we have no specific, but had to treat every case according to its gravity and environments. Gave phenacetine and quinine in high fever; also used digitalis and strychnia as heart tonics. Had used small doses morphia with good effect; blistered in third stage, and gave stimulants as case required.

MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Meeting of February 13th, 1893. Dr. Wm. P. Carr read a paper on the

Treatment of Uterine Fibroids. (See page 34.) Discussion :

Dr. I. S. Stone heartily commended the views of Dr. Carr. Perhaps he favored more radical operation where the tumors are large enough not to lead us to expect good results from oöphorectomy. Women do not apply soon enough in the absence of pain and hæmorrhage. Subperitoneal tumors do not give symptoms early enough to give much hope of good from removal of the appendages. He related the case of a woman who, in poor health, was growing worse. The tumor was impacted in the pelvis; on each side were smaller tumors separating the broad ligaments, while still growing on the posterior surface of the uterus was a larger tumor adherent to everything posteriorly. Extirpated the entire tumor and the uterus before the appendages could be moved. Where the uterus is movable, and the ovaries can be removed easily, do so. A decision cannot be reached until an exploratory incision is made, when we must be prepared to remove everything. He does not believe electricity will furnish the good results obtained by surgery. Electricity is likely to result in uterine colic, and the patient will not submit to further treatment. A powerful current must be employed to do any good. In cases where the patient is nearing the menopause, and the tumor is not

growing, we should not resort to surgery, since many of these tumors are innocent.

Dr. Scott thinks cases are seldom diagnosed when the tumor is the size of a hen's egg. The treatment varies according to the character of the tumor. Calcified tumors, suppurating tumors, sarcomatous and sloughing degenerations, and cystic fibro-myomata, can only be treated surgically. Simple fibro-myomata may be treated otherwise. Hypodermatic injections of ergotin are not as much used now as formerly. He does not think they are of much value. He has no faith in the electrical treatment. He believes we can increase the growth by electricity as frequently as we can diminish it. Apostoli's, Massey's and Keith's advocacy of electricity makes it more worthy of consideration. He does not believe in operating until the patient has been observed for some time and treated by other means; but believes by tonics, good food, support of the abdomen, daily evacuation of the bowels, plenty of exercise, avoiding mounting stairs, as also sudden and heavy lifting, menorrhagia and dysmenorrhœa may be abated, as in the case briefly cited by himself. Unmarried woman, aged 38 years. Fibroid, the size of two fists; has been present for probably seven or eight years, from the history she gives. At present, she is in perfect health. No menorrhagia, metrorrhagia, or dysmenorrhœa. Tumor is benign, and if growing at all, has not been able to perceive it. If her bowels are evacuated daily, and she avoids severe strains, he anticipates a useful and comfortable life for her, with her ovaries and tumor. If otherwise, he will operate when indicated.

Dr. Bishop said that Rosa H. Engert holds that fibroids are nothing more nor less than organized giant thrombi. They have their periods of growth and decay, and the life of a fibroid tumor is said to be from two to eight years, when degenerative changes take place.

Eighteen or twenty years ago, Lawson Tait pointed out that two separate and distinct diseases are confounded under the term myoma, or fibroid—the multinodular, which is distinct in its etiology, pathology and surgical treatment, from the rapidly growing, soft, œdematous myoma. The removal of the appendages, he says, will not correct or lessen the growth of the soft myoma, while, in the other class of cases, it does both. While Tait urges the necessity of carefulness in recognizing these facts, he asserts that an exact diagnosis in the abdomen is an impossibility, and only

the rash and inexperienced assert the contrary. Dr. Carr stated that he did not think the treatment of fibroid tumors by electricity of enough importance to give it a place in his valuable paper; so he dismissed the subject by a few after remarks, condemning the method. Dr. I. S. Stone is equally as bitter against electricity in these cases. Dr. Scott is willing to concede that there may be something in it, upon the strength of reports of the eminent men who use the current in those cases, but he is still a "doubting Thomas." These gentlemen are all gynæcological surgeons, and believe in the knife, and would unhesitatingly unsex these women without giving them a trial by electricity, because they have not succeeded in its use. But, Dr. Carr remarked, that he is not a surgeon, and therefore he would not attempt an abdominal section. But this is no argument against surgery. In some severe cases, surgery is our only hope; for instance, in cases where life is threatened by pressure, degeneration, or suppuration. But electricity most certainly has its place in the successful treatment of fibroid tumors; and because surgeons sometimes fail, with their knives, to get good results, that is no argument whatever against electricity in the treatment of these cases; for it does not prove that others who know how to use electricity, and are in constant daily practice with the battery, do not always get good results. He is thoroughly satisfied that when electricity is properly used not only may many of these cases be benefited, but, in the large majority of them, the tumor may be forever eradicated. The cases which Dr. Carr has mentioned in his paper, and in which he would remove the ovaries, are the very cases that would be most benefitted by electricity, with very little inconvenience to the patient. While Dr. Bishop has been practicing electro-therapeutics for a number of years, his experience in this class of cases is limited, but all the cases he has treated have been benefitted; and even if he had no individual experience at all, the progress that electricity, in the cure of these cases, has made in the last few years, added to the published experience of such men as Apostoli, Keith, Massey, Martin, and others, would be convincing enough for him. The great trouble he has found with such patients is that, as their symptoms improve, they get to feeling well, imagine themselves cured before they really are, and stop treatment too soon. Such had been his experience, at least. The women continued to attend to their daily vocations, coming to his office three times a week. He gave each of them only 75

m., for twenty minutes at a time, each treatment. He treated a case of uterine cancer, in a very advanced stage, which was bleeding constantly. Dr. J. Taber Johnson and J. Ford Thompson saw her in consultation, but of course neither would operate. After the first application of electricity the hæmorrhage ceased, and after a number of treatments the tumor, as far as he could feel, was hardened; her pain was materially lessened; and while she rapidly failed, and eventually died, she was made more comfortable, and he believes her life was prolonged by the treatment. No doubt, as a rule, too strong currents are used in such cases. But since the introduction of improved intra-uterine electrodes, much stronger currents can be used than would be thought safe by one who was only acquainted with the old style of electro-puncture. In fact, electro-puncture has been pretty well abandoned, except in rare cases. Dr. Bishop further stated that Dr. Gehrung, of St. Louis, devised an ingenious little instrument for the treatment of fibro-cystic tumors. It is a trocar and canula-electrode, which admits of the tumor being treated regularly by the current, while, at the same time, the canula may be left in the cyst for drainage purposes. Cases are reported cured by this method. He thinks that where electricity is judiciously used, and properly applied, it is the most rational method of treatment that we have, inasmuch as it follows and improves upon nature's method of cure. It causes the tumor to degenerate by a concentration of electric energy at the action-pole in or upon the tumor, destroying its vitality, while, at the same time, by a dissemination of the current, those nerves and absorbent vessels, in the immediate vicinity of the tumor, are stimulated to activity, and absorption of the organized body is more certain and rapid. At the same time, the whole body is charged by induction, and every individual organ is toned up and rendered more active, constipation usually ceases to be any longer troublesome, the kidneys act well; in fact, the general health improves, and, in the large majority of cases, this can be done without confining the patient to bed.

Dr. Stone stated that such severe uterine colic has been produced in his cases that the patients were not anxious to return for treatment. Such has not been Dr. Bishop's experience, and when this takes place, it is a warning to lessen the current. When the current is smoothly and regularly increased, it is surprising to see what strength of current can be employed without discomfort. The discomfort is usually

complained of at the surface-electrode. Of course we may have some uterine pain from slight contraction of the uterus, but, as a rule, nothing to complain of, and is rather beneficial than otherwise. So that, to conclude his remarks, Dr. Bishop thinks he is justified in saying that, in the light of all the published successes in the treatment of these cases by electricity in the past few years, to deform and unsex a woman, without first giving her fair play by a thorough trial of electricity, is, to say the least, criminal. He thinks the time will come when early recognized cancer will be cured by electricity.

Dr. E. L. Morgan does not think the general practitioner knows much about the results of electricity. The result depends upon the position of the poles. It is a disputed point as to whether there are sensitive nerves or lymphatics in uterine fibroids. Few blood-vessels penetrate the substance of the tumor, although the tissues around are very vascular.

Dr. Carr, in closing, said that he agrees with Dr. Stone, that we must be prepared for any operation when opening the abdomen. The case of Dr. Scott is just the kind that demands operation. It is difficult to know when the tumor is growing. There is a great deal of risk in waiting. The danger of the operation is not greater than child-bearing. The tumor may, at any time, begin to grow rapidly or degenerate, and therefore he urges early operation. Whatever effect electricity has on the tumor, it cannot improve diseased ovaries, and the patient does not get well. He does not believe that electricians have followed their cases far enough to warrant us in placing much confidence in their conclusions.

VIRGINIA STATE BOARD OF HEALTH.

After much agitation of the subject by the Chamber of Commerce of Richmond, etc., as to the impending necessity for reorganization of the State Board of Health under the legislative enactment of 1872, Governor P. W. McKinney, early in March, 1893, appointed the following physicians to compose the said Board for the legal term of four years: Drs. Rawley W. Martin, of Chatham (Ex-Pres. Med. Soc. Va.), Robert J. Preston, of Marion (Supt. Southwestern Lunatic Asyl.), Paul B. Barringer, of Charlottesville (Prof.

Physiol. and Surg., Univ. Va.), James Parrish, of Portsmouth (Memb. Med. Exam. Brd. Va.); and the three following from Richmond, as the law requires that three members shall be residents of this city: Drs. Paulus A. Irving (recently Secty. Med. Exam. Brd. Va.), Hugh M. Taylor (Pres. Med. Exam. Brd. Va.), and Landon B. Edwards (Secty. Med. Soc. Va.)

These gentlemen met at 8 P. M., March 23, in one of the Parlors of Murphy's Hotel, Richmond, Va. Dr. Edwards by request took the chair. After stating the objects of the Board and the law under which it exists, he called for nominations for permanent organization. Dr. Martin was elected *President*, and Dr. Irving *Secretary*, who were accordingly inducted into office.

Drs. Parrish, Barringer and Irving were appointed a committee to draft by-laws, etc., for the government of the Board.

Dr. Edwards called attention to the original law as enacted 1872, and its re-enactment in 1890. It assigns important, expensive and laborious work to the Board, yet absurdly provides that the Board shall not be a charge upon the State. Members of the Board are in no way more interested in the results of its deliberations than other citizens; and it is ridiculous to suppose that seven practitioners who may be willing, for the common good, to devote time, study and energy to the vital questions involved, will likewise consent to bear the expenses. Executive officers must be given support; travelling expenses of members and agents in discharge of duty must be paid; clerk (when needed), stationery, postage, etc., must be provided for; and of course the services of a bacteriologist, chemist, etc., must be paid.

Dr. Irving moved that a Committee on Finance be appointed. Carried. Drs. Irving, Preston and Taylor were appointed.

On presentation by Dr. Irving it was resolved that, as the Committee on Health and Sanitation of the Richmond Chamber of Commerce has always manifested an active interest in sanitation, the members of said committee be invited to confer with the State Board to-morrow as to ways and means, etc.

Dr. William A. Thom, of Norfolk, quarantine officer of Elizabeth river, etc., by request, made a verbal report of the important proceedings of the recent meeting in Washington, D. C., of Quarantine and Health Officers. He stated that Dr. Jenkins, as Health Officer of New York city, is the right man in the right place; he is anxious for light to

guide him. He was, however, surprised at positions taken by Dr. Durgin, the Health Officer of Boston, who differed with everybody else in the Convention with reference to danger from rags, etc. As for cholera, Dr. Thom was convinced that more was to be feared at Norfolk from Boston and New York than from ships direct from Europe. He had had occasion to turn back a large shipment of rags from Boston consigned to Richmond and afterwards discovered that the disinfection had been very imperfect. He considered that rags were the greatest source of contamination, and that the best way to disinfect rags was to boil them. The next most dangerous source was immigration, but not so much from the person as from the clothing. He said that Philadelphia had excellent sanitary arrangements, and many of the cities along the coast were well prepared to cope with the dread disease, but he reiterated that the place for the Board to watch was Boston, Mass.—in spite of the fact that Dr. Durgin pleaded that the rich South wanted to break up the trade in rags of poor Massachusetts. Dr. Thom antagonized, on authority which he cited, the proposition of Koch that the cholera bacillus could only live four days, particularly when dried. As to the relative powers of the Marine Hospital Service and State Boards of Health, he stated that the Federal authorities cannot throw a wall of quarantine around Richmond, for instance, except when requested by Governor McKinney, but they can create a quarantine completely around the borders of the State. Under the present Federal law a vessel can come into port, and can pass over local authority. The law is inadequate at several points.

Dr. Edwards moved a vote of thanks to Dr. Thom for his attendance and remarks, which he thought very timely. Carried. He also thanked Mr. J. A. McGilvray, Secretary of the Virginia State Board of Education, for responding to the invitation to be present, and his offer to aid the efforts of the Board of Health in any way in his power through the thorough organization of public school authorities.

Dr. Barringer offered the following, which were adopted:

1. There shall be appointed an agent of this Board in each town and village of the State not having a regular local organization of health.

2. That instructions shall be given to each agent as to his duties and as to what he shall do in case of suspected epidemic disease, and as to whom he shall notify.

3. That a general preparatory survey of the water supply

of each of the towns and cities of the State be made with the co-operation of the authorities of said towns and cities.

The discussion on these resolutions developed that the consensus of opinion was that impure drinking water was the most fruitful medium of propagating the cholera germ.

Dr. Barringer stated that Dr. Tuttle, of the University of Virginia, had kindly offered the use of his Bacteriological Laboratory and apparatus to the Board, but would not be able to do bacteriological work. Drs. Mallett and Dunnington, also of the University, likewise offered the use of their chemical laboratories and apparatus. Thanks voted.

Dr. Edwards offered the following, which was adopted:

Resolved, That the President appoint a committee of three members to prepare a paper on cholera for the instruction of its agents, and also one for public instruction and advice.

Drs. Edwards, Barringer, and Preston were appointed.

Dr. Edwards stated that some cases of small-pox exist in some of the counties in Southside Virginia, and urged that the profession see that their patients are protected by vaccination. To answer inquiries he is frequently receiving, he remarked that Messrs. W. P. Poythress & Co., of Richmond, Va., are the Virginia and North Carolina agents of the New England Vaccine Co., and keep constantly on hand guaranteed freshly charged vaccine ivory points, which can be ordered by mail.

The following, offered by Dr. Taylor, was adopted:

Whereas the existence of cases of small-pox in sections of this State has been reported to the State Board of Health, through the public press, through reliable physicians, and through the office of Superintendent of Public Instruction,

Resolved, That the officers of the State Board of Health be instructed to render all possible aid in their power to prevent the spread of the disease.

The Board adjourned to meet at 10 A. M. to-morrow.

The Board met at 10 A. M., March 24th. On motion, it proceeded in a body to the Governor's office to report their organization, and to ask the Governor for such advice, as to the ways and means for proceeding, as he might suggest. The Governor expressed his most cordial approval of the steps taken by the Board, and promised such financial help from the contingent fund at his disposal as the limited amount not expended would allow, in order to meet necessities or emergencies.

On adjourning from the Governor's office, the Board, according to appointment, met Messrs. Bissell and West, com-

mittee of the Richmond Chamber of Commerce, in another office in the Capitol. Dr. W. T. Oppenheimer, President of the City Board of Health, was also present. Free interchanges of opinion were made, in which co-operation and assistance were promised.

On motion, a committee (Drs. Irving, Parrish, and Edwards,) was appointed to draft a formal paper, stating the wishes of the State Board, to be presented to the Committee of the Chamber of Commerce, so as to let it be the basis of a report to the Chamber of Commerce. All of the Chambers of Commerce in this State will be looked to for assistance until the session of the General Assembly of Virginia next winter, when it is expected that the Legislature will provide sufficiently for the efficiency of its own State Board.

At an adjourned conference of the Committees of the Board and of the Richmond Chamber of Commerce, March 30th, Drs. Irving and Edwards, of the Board, and Messrs. Bissell, John R. West, J. W. Atkinson, Drs. Charles M. Shields and H. M. Taylor, representing the Committee on Sanitation of the Chamber, were present. After full interchange of opinions, the Committee on Sanitation unanimously recommended the adoption of the paper presented by the Committee of the Board, requesting the Chamber to adopt a plan to raise sufficient funds for the expenses of the Board until the Legislature meets.

The State Board of Health will probably meet again in Richmond during the last week in April.

Analyses. Selections, etc.

New Instrument to Remove Secundines after Abortion, etc.

Dr. J. S. Poyner, of Bartlett, Tex., in considering (*Lamphear's Med. Index*, March, 1893,) the usual instrumentalities for removing the secundines after abortions, etc., remarks that where the pelvis is shallow, the abdominal walls thin and relaxed, no inflammation, swelling, nor tenderness, the *bimanual plan* may be used with some success; but such cases are rare. Generally speaking, "the idea that any tractive force may be exerted upon the little slippery [adherent] placenta or fragments," or hooked out by the finger, "is surely one of the time-honored delusions of the profession." *Placental forceps*, if the jaws are wide enough to grasp with certainty, are introduced with difficulty; and the fragmen-

tary slippery mass, if grasped with firmness, still either slips out of "the bite" of the blades, or is mashed into even more fragile fragments. In short, placental forceps are unreliable, and unsatisfactory. *The wire loop, blunt hook*, etc., are successful only where the secundines are loose and about to drop out anyway. *The curette* is an excellent instrument for scraping the walls of cavities; but as to removing a little placenta, or fragments, etc., from a relaxed uterus, with it, the problem is about the same as fishing an eel from a tub of water with a weeding hoe.

To meet all indications and conditions, the author has devised an instrument which he calls *the "capiat,"* which he says he has used for years and has stood the test of actual practice. It consists of a tube nine or ten inches long, half inch in diameter, with rings for handles at one end. Through the tube a rod extends, with a ring at one end for a handle. At the other end of the rod is a set of six springs, in the shape of flat wires. As these lie in the tube, they of course are not seen; but when pushed out, they expand elliptically. A quarter turn of the handle makes each of the six wires assume equi-distant positions, like so many strips extended from end to end of a hen's egg. Before using, render the instrument thoroughly aseptic; also the hands and fingers. To use "the capiat": Pass a finger to the os, which should be dilated to at least half an inch. The closed instrument is then passed to the fundus uteri. It is well to place one hand above the symphysis over the fundus to assist judgment as to the proper introduction, etc. The instrument being in position, hold the rod steady, while the tube is pulled back, thus freeing the springs and allowing them to expand against the uterine walls. Then make about a half turn of the whole instrument, which scrapes the walls, and the fragments fall in the oval space left between the expanded six blades—as into a basket. Hold the rod steady; push up the tube, thus tightening the springs upon any mass that may be within the oval space. Now withdraw the capiat with its contents—steadyng the uterus as the instrument is being withdrawn. Used rationally, cautiously and gently, it speedily, harmlessly, painlessly and effectually does its work. (Illustrations are used in Dr. Poyner's article to represent his capiat.) A small, round, shallow, dull spoon with a long handle is the best instrument for severing very firm and extensive attachments—although when attachments are firm and extensive there is little danger of decay or sepsis, and any one may safely wait awhile.

The Diagnosis of Early Ectopic Gestation

May be assisted by remembering Smolsky's observations (noted in *N. Y. Polycl.*), that at about six weeks the ectopic sac is the size of a pigeon's egg; at end of second month, the size of an English walnut; at two and a half months, as large as a hen's egg; at three months, the size of the fist. As a crucial test, make examinations under anæsthesia. If still in doubt, explore the uterine cavity with a curette, submitting the curettings to microscopical examination, since Ayers has demonstrated that the decidua of normal pregnancy can readily be distinguished from the pseudo-decidual membrane of ectopic gestation.

Trional for Agrypnia.

Under quite recent clinical tests, trional was found to have a special value in uncomplicated agrypnia, or wakefulness with a certain amount of excitement. It acted promptly and effectively in doses of 1 to 2 grammes. Trional is useful also in convalescence from the abuse of cocaine and morphine. Some of the reports state that doses of 2 grammes would usually procure for these patients a sleep of from seven to nine hours' duration. According to a recent report of Boettiger, dementia with hallucinations was very favorably influenced by trional. The same writer reports 33 cases of insomnia, with physical disturbances in the insane; these were primary or secondary, or were accompanied by moderate delirium or motor restlessness. Doses of 1 to 2 grammes promptly induced sleep of six to ten hours. (Full report in *Berl. Klin. Woch.*, No. 42, 1892.)

Piperazin in Gout, and as Uric Acid Solvent.

Drs. Biesenthal and Schmidt review (*Berliner Klin. Woch.*, in *Therap. Gaz.*) the clinical reports on piperazin which have appeared recently. The reports of Vogt, Ebstein, Heubach, Krakauer and Brik, based on the use of Schering's Piperazin are all very favorable. Testimony seems to be nearly unanimous that the remedy is harmless, and that it is effective as a solvent of uric acid. Biesenthal and Schmidt report seven cases in which the remedy has been tried. Four of the cases are given in detail. In three of the latter, who were gouty patients, and had attacks of gout, marked relief was obtained. The fourth patient had violent attacks of renal colic. On the first day the piperazin was used an extraordinary quantity of gravel was passed. After the second dose, on the next day, large quantities of gravel were

passed several times, and almost immediate relief was experienced. Similar results were obtained in other cases. Internally, piperazin is best given in dilute solution in doses of fifteen grains distributed during the day. Its taste is very slight. As it is not irritating to mucous membranes, a one or two per cent solution may be employed in washing out the bladder in the case of vesical calculi. Hypodermic injections into gouty deposits and local applications to gouty swellings may also be employed.

Book Notices.

Human Anatomy. *A Complete Systematic Treatise By Various Authors. Including a Special Section on SURGICAL AND TOPOGRAPHICAL ANATOMY, Edited by HENRY MORRIS, M. A. and M. B. Lond., Surgeon to and Lecturer on Surgery, formerly Lecturer on Anatomy, at Middlesex Hospital; Late Examiner in Anatomy, etc. Illustrated by 791 Woodcuts—214 of which are Printed in Colors from Drawings Made Expressly for this Work by Special Artists. Philadelphia: P. Blakiston, Son & Co. 1893. Large 8vo. Pp. 1302. Half Russia, \$9.50; Leather, \$8.50; Cloth, \$7.50. (For sale by Hunter & Co., Richmond.)*

It goes against the grain to say anything against "Gray's Anatomy," for it has stood as authority for the lifetime of a generation. But we suppose that it has now about had its day, and will have to give place in the offices of practitioners, and in the demand of students, to "*Morris's Anatomy*." It is written by ten of the foremost anatomists and surgeons of England and Ireland, namely, Mr. J. Bland Sutton, Mr. Henry Morris, Mr. J. H. Davies-Colley, Mr. Wm. J. Walsham, Dr. H. St. John Brooks, Mr. R. Marcus Gunn, Mr. Arthur Hersman, Mr. Frederick Treves, Mr. Wm. Anderson, and Mr. W. H. A. Jacobson—each of whom is responsible for the statements made in their respective chapters. The descriptive text is everywhere clear, and no pains have been spared by either author, editor or publishers, to secure the most accurate work of special artists, so as to make each cut represent accurately the anatomical structures and relations of the various parts of the human body. It is unfortunate (and yet it was next to impossible to avoid it in the first edition of any great work requiring such exactness) that so large a page of errata had to be inserted. So that we would advise each purchaser of *Morris's Anatomy* to

transfer to their proper places all the corrections indicated on the page facing the title. An examination of the work will be its own introducer to popular professional favor. The completeness of the book is shown by the fact that the Index alone is in double columns, in small type, and yet covers 60 pages. The 128 pages devoted to Topographical and Surgical Anatomy, by Mr. Jacobson, possesses every excellence of Holden's *Landmarks*, and, in some particulars, this Section is an improvement. All in all, this *Anatomy* is most heartily and unreservedly commended to the profession and to students. It is a great book.

Disease in Children. *A Manual for Students and Practitioners.* By JAMES CARMICHAEL, M. D., F. R. C. P. Ed.; Physician Royal Hospital for Sick Children. *Illustrated with 31 charts.* New York: D. Appleton & Co. 1892. Small 8vo. Pp. 59.. Cloth. Price, \$3. (For sale by West, Johnston & Co., Richmond.)

The author, experienced as a practitioner, well describes symptoms, adding reports of cases so as to emphasize the points of the text. While systematic in the arrangement of subjects, etc., it is scarcely enough Americanized to take the place of the text-books adopted by colleges in this country; for instance, cholera infantum (summer diarrhœa of children) is not considered, although the disease itself is the great dread of all having charge of children in American cities during June and July especially. However, for the purposes of the general practitioner, with reference to most of the diseases common to infancy and childhood, this is a valuable consultation or guide-book—especially if used to supplement the usual text-books.

Manual of Clinical Ophthalmology. By HOWARD F. HANSELL, M. D., Lecturer on Ophthalmology in Jefferson Medical College, etc., and JAMES H. BELL, M. D., Ophthalmic Surgeon to Southwestern Hospital and Dispensary, etc. *With 120 Illustrations.* Philadelphia: P. Blakiston, Son & Co. 1892. Cloth. 12mo. Pp. 231. Price, \$1.75. (For sale by West, Johnston & Co., Richmond.)

This Manual is thoroughly practical in all of its teachings—both by text and illustration; but is perhaps a little too exclusively surgical in its scope for all except the surgeon or specialist. Of course no attempt is made to treat the subjects exhaustively; but, in a manual possessing so many excellencies, some criticism might be made that certain important matters are not stated, as, for instance, how

to ripen an immature cataract, etc. The Sections devoted to descriptions of diseased conditions are all well written, and are serviceable to any doctor who has to diagnose diseases of the eye. As a carefully prepared guide-book for the student and specialist, it is an excellent manual.

International Clinics; A Quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, etc., etc. By Professors and Lecturers in the Leading Medical Colleges of the United States, Great Britain, and Canada. Edited by JOHN M. KEATING, M. D., LL. D., Colorado Springs, Colorado; JUDSON DELAND, M. D., Philadelphia; J. MITCHELL BRUCE, M. D., F. R. C. P., London, Eng.; DAVID W. FINLAY, M. D., F. R. C. P., Aberdeen, Scotland. Vol. IV. *Second Series*. 1893. Philadelphia: J. B. Lippincott Co. 1893. Cloth 8vo. Pp. 387. Price, \$2.75.

In our January No., 1893, we gave so full a description of the scope and excellence of these *Clinics* that we must now be content to refer our readers to it. Vol. IV is fully the equal in merit to any of its predecessors, including, as it does, 51 well-prepared lectures on many more subjects of constant importance to every practitioner. Indeed, there is something in each volume of special interest to every class of practitioners—general or special. Each annual series begins with April number. Hence, that practitioner acts wisely—lays up for the rainy day—who at once remits \$11 for the four quarterly issues. Every chapter or lecture bears the impress of careful preparation by the author; so that each speaker brings his subject well up to the day of his lecture. A good index is appended to each volume, and each Vol. IV of a series contains a general index of the annual *Series*, thus greatly aiding speedy references to subjects.

System of Genito-Urinary Diseases, Syphilology, and Dermatology. By various Authors Edited by PRINCE A. MORROW, A. M., M. D., Clinical Professor of Genito-Urinary Diseases, etc., University of City of New York, etc. *With Illustrations*. In three volumes. Vol. I.—*Genito-Urinary Diseases*. New York: D. Appleton & Co. 1893. Large 8vo. Pp. 1074. (For sale by subscription only.) Price, per volume, Cloth, \$6.50; Sheep, \$7.50.

It seems that however nearly perfect was the last work on such subjects as are named in the title, the one now under notice is better. Looking upon this Volume I as a treatise on genito-urinary troubles, exclusive of syphilis, we find in it a fuller description of each disease, etc., than is

usually given. Much of the work is necessarily surgical; most of it, however, is medical; so that neither the surgeon nor the physician in general practice can possibly go without it, if he proposes to keep up with the advanced therapeutics of the day. We have been struck in general with the serviceable omission of extreme views and advice, except where an old error has to be supplanted by well recognized demonstration; so that the practitioner is not taught by bombast, but by the well studied results of clinical observation and experience. Of course, it was impossible for authors respectively to include in their articles references to many things now being established by daily practice of some. Thus, for instance, we find no allusion to demonstrations of *curability* of tuberculosis of the bladder, as made by Dr. Hunter McGuire in his hospital in this city. But we have not space to itemize such steps of progress as are being made even while this standard *system* is passing through the press. Let it suffice that we most fully recommend this "System of Genito-Urinary Diseases," etc., as the proper one for the *practitioner*, if he has to limit himself to one treatise on "System."

Chemistry and Therapeutics of Uric Acid, Gravel and Gout.

Being the Croonian Lectures for 1892, Delivered Before the Royal College of Physicians of London. With Additions. By SIR WILLIAM ROBERTS, M. D., F. R. S. London: Smith, Elder & Co., 15 Waterloo Place. 1892. Cloth. 12mo. Pp. 136. Price, \$1.25. (For sale by West, Johnston & Co., Richmond.)

The four lectures here presented as representing the revised information on the subjects named in the title are of great value to the practitioner as well as to the laboratory worker. The chemical description of uric acid, the urates, of uric acid gravel, and of uratic precipitation in gout, along with the comparative physiology of uric acid, the prophylactic treatment of uric acid gravel, and the bearings of the investigation of uratic precipitation on the therapeutics of gout—these matters are all discussed in terms easy of understanding by the physician, and in a manner to be of practical service to him in prescribing. The author well states that much of the value of mineral waters consists in the fact that patients will drink abundance of them—especially if they go to the Springs, etc.—which they will not usually do of ordinary hydrant water, etc.

Year Book of Treatment for 1893—*A Critical Review for Practitioners of Medicine and Surgery.* By TWENTY TWO ENGLISH CONTRIBUTORS. Philadelphia: Lea Brothers & Co. 1893. Cloth. 12mo. Pp. 496. Price, \$1.50.

The title describes the character of the book. This Year-Book possesses the special value to American doctors that it represents Continental practice—there being very little reference to the contributions of American doctors which can be got by subscriptions to American journals. The selections are all useful, because new, and the compilations cannot be excelled. "Anæsthetics" and "Public Health and Hygiene" for the first time have distinctive divisions in this Annual. The subjects are well classed, and the indexes are so perfect as to enable one to make immediate reference. In short, such a book as this should be taken each year by every practitioner. The price is so small that the poorest can possess it.

Editorial.

Death Under Ether Anæsthesia.

The daily New York papers, etc., have acquainted everybody with the circumstances attending the recent death of Col. Elliott F. Shepard. The fact that Drs. James W. McLane and Charles McBurney were the medical attendants of the distinguished patient is guarantee that all was done that could have been done, and they are exonerated from blame or censure. We quote the statement by these gentlemen as epitomized by *Med. and Surg. Reporter*, April 1st:

"On Friday afternoon, March 24, ether was administered to Mr. Shepard with the view of exploring the bladder for stone, and, if practicable, removal of the calculus, and for a few moments he inhaled 'uncommonly well, his breathing being full and free.' Afterwards (time not stated) 'his color changed somewhat, and it was apparent that he was nauseated. In another moment he vomited. After this his color was better, but as his respirations were not satisfactory, nor his pulse, the further administration of the anæsthetic was discontinued. As yet, not enough ether had been given to admit of proceeding with the proposed operation.' 'The breathing continuing very labored, an examination was made of the larynx to determine

whether possibly some article of food had lodged in it, but such proved not to be the case.' 'The patient's condition was now so alarming as to call for extreme measures, and in hope that the symptoms might be due to the presence in the wind-pipe of vomited material accidentally inhaled, the operation of tracheotomy was performed. No foreign material of any kind was found, and we *even passed a rubber tube down the wind-pipe and into the bronchial tubes, making use of a powerful aspirating syringe* without discovering the presence of anything but bloody mucus.' Oxygen was used, 'and under its influence the patient slightly revived.' 'Artificial respiration, and every other means which might possibly give relief, was resorted to.' 'From this time on, his breathing became even more embarrassed, but still artificial respiration was continuously kept up, although the pulse became steadily more feeble.'

"He sank rapidly into unconsciousness, and, in spite of all efforts, died ten minutes after 4 o'clock. In our opinion, Col. Shepard died of sudden œdema and congestion of the lungs following the administration of ether, but, primarily, due to some cause unknown to us.'"

If this death serves to impress the lesson so often taught, that the surgical use of any and all anæsthetics is dangerous, and that they are all to be used only when demanded, then good will result from the unfortunate accident in practice. It is true that ether rarely kills outright, as in this case—it is not generally an honest slayer; so that its mortality record is hard to estimate. It may have ever to remain an opinion; but we cannot help believing that many a death, occurring days after an operation in which ether was the anæsthetic, was due to this agent; so that the actual ratio of deaths from ether and chloroform is not in favor of the greater safety of ether. On the other hand, when chloroform kills, it kills quickly—it is an honest murderer when it kills. To use an Irishism, as expressed by one of our local professors: "The dead man on the table speaks for himself." When the one anæsthetized by chloroform gets up from the table, we feel safe—we know chloroform danger is over; but not so with him who used ether as the surgical anæsthetics.

We have not written the above as, in any sense, a criticism of the management of the case in hand; but simply that the foolish statements of some enthusiastic etherizers may receive a check—such as "he who uses chloroform as his anæsthetic with a fatal result should be prosecuted for murder, etc." The fact is, there should be a choice of one

or the other, according to the case to be operated on. If there is disease of the kidneys, etc., as a rule use chloroform; if there is a weak heart, choose ether; in most cases of apparent healthfulness, use the A. C. E. mixture.

Medical College of Virginia.

The "Commencement" of this College will take place on the night of April 5th, when 25 graduated M. Ds. will be announced. During the afternoon of the same day, the Alumni Association will hold its annual meeting—Dr. W. O. Owen, of Lynchburg, Va., being the orator for the occasion.

The "American Text-Book of Surgery,"

Edited by Profs. Keen and White, of Philadelphia, issued only a few months, is a phenomenal success. It has been adopted as a "Text-Book" by forty-nine of our leading medical colleges and universities. About 5,000 copies have been sold libraries, and every indication points to a sale of at least as many copies more in the next six months. Dr. Nicholas Senn, of Chicago, is preparing a "Syllabus of Lectures on the Practice of Surgery," arranged in conformity with the "American Text-Book of Surgery," which will be a valuable aid to all who have this great book.

Dr. J. B. S. Holmes' Sanitarium for Women, at Rome, Ga.,

Was destroyed by fire January 27th. All the patients were safely removed. Damage about \$100,000; insurance, \$65,000. We are glad to learn that Dr. Holmes is rebuilding, with the purpose of making the new Sanitarium the most perfect hospital in America for women.

Dr. John H. McIntyre's Private Hospital.

On advertising page 48, of March number, the printer made the blunder of putting the electro illustrating Dr. McIntyre's Hospital in the advertisement above—Dr. Massey's. The respective electros of these most worthy and important private institutions appear correctly in this issue.

Medical Association of Georgia.

The Forty-Fourth Annual Session will be held in Americus on April 19th, 20th and 21st, 1893. *President*, Dr. A. A. Smith, Hawkinsville; *Vice-Presidents*, Drs. Geo. J. Grimes, Columbus, and Robt. H. Taylor, Griffin; *Secretary*, Dr. Dan H. Howell, Atlanta; *Treasurer*, Dr. E. C. Goodrich, Augusta.

Professor of Surgery to be Elected, Medical College of Virginia.

The death of Dr. J. S. Dorsey Cullen leaves a vacancy in the chair of Professor of Surgery in the Faculty of the Medical College of Virginia, which has to be filled by election by the Board of Visitors of that institution during a meeting to be held *about* May 1st, 1893. Surgeons who wish their candidacy to be considered should file their credentials, etc., with the acting Dean of the College, Dr. J. S. Wellford, Richmond, Va., so as to be in his hands by the last week in April, 1893.

Section on Therapeutics of the Pan-American Medical Congress.

It is the earnest desire of the officers of the Section on Therapeutics that both specialists and general practitioners should contribute articles to its proceedings. Gentlemen who intend to read papers at this meeting in Washington, D. C., September 5-8, 1893, should notify Dr. Hobart Amory Hare, Executive President, Philadelphia, Pa., at once, and should send him, by July 10th at the latest, an abstract of their paper, in order that it may be translated into the three official languages of the Congress and published in the programme. The importance of this Section, and the interesting papers which have already been promised, give assurance of a very successful meeting. Dr. Edward Randall, Jr., of Galveston, Texas, is the English-Speaking Secretary.

Obituary Record.

Dr. J. S. Dorsey Cullen

Died at his home in Richmond, Va., after a protracted illness, March 22, 1893, in his 61st year. His medical education was received at one of the Philadelphia Colleges—after which he returned to Richmond, where he continued in active practice until his death. During the War, he served as Medical Director of General Longstreet's Corps, C. S. A. After the War, he was elected Professor of Diseases of Women and Children in the Medical College of Virginia. On the resignation of Dr. Hunter McGuire, about 1881, Dr. Cullen was elected to fill his place as Professor of Surgery, which position, together with that of Dean of the Faculty,

he held till his death. He was a Charter Fellow of the Medical Society of Virginia, 1870, of which he remained an active member. In 1871, he helped to establish the *Virginia Clinical Record*, of which he was one of the editors until its discontinuance in 1874. For years he was Surgeon to the Richmond City Almshouse, was President of the Richmond Academy of Medicine, a member of the American Medical Association, of the Southern Surgical and Gynæcological Association, etc. The esteem in which he was held by his colleagues and friends was attested by the large and sorrowing congregation assembled at the Presbyterian church on the occasion of his funeral services. The profession of this city, the students and Faculty of the Medical College of Virginia, etc., held meetings, at which resolutions usual to such occasions were unanimously adopted.

Dr. Arthur Zirkle Koiner

Died at his home in Roanoke, Va., March 22, 1893, after an illness of about a week. He was born in Augusta Co., Va., 1855. He was graduated M. D. by the University of Virginia, 1875, and then spent several years in further perfecting himself in medical studies—both in New York and Heidelberg—devoting most of his time to diseases of the eye and ear, to which specialty he lately, more or less, limited himself in practice. He joined the Medical Society of Virginia in 1878, and attended several sessions. At the session of 1892, he was elected a Vice-President. During the session of 1879–80, while residing in Richmond, he served as Lecturer on Materia Medica and Therapeutics in the Medical College of Virginia. About 1881, he moved to Roanoke, Va., where he continued in practice till his death. His popularity as a physician and citizen is well demonstrated by the lengthy accounts given in the Roanoke papers of his life-work, and by the resolutions adopted during the meeting of the physicians of his city to take action on his death.

Dr. H. T. Barton

Died at his home in Lexington, Va., March 22nd, 1893, aged 70. His distinction in the profession was well known, and especially was his medical skill recognized by the hundreds of students who have attended the Virginia Military Institute, etc. On account of failing health, he resigned Fellowship in the Medical Society of Virginia years ago.

honor to present to me for consideration is by no means the least important. It may be selfish in me, but I am rather thankful that the responsibility of solving the problem in a radical manner—and such radical solution must come sooner or later—will necessarily devolve upon another generation than my own.

A point well worthy of attention, in seeking to remedy the evils which so vitally interest the Southerner, is this: Much may be done with the negro by a proper example on the part of the white race, which must of necessity be his model, socially, politically and morally. Ignorance of sexual physiology has led the average white boy, at the age of puberty, to believe that fornication is a necessity—or, at least, a luxury at which the whole world winks. You know only too well the train of misery following the indoctrination of such ideas. This fallacious idea is responsible for much of prostitution and sexual crime. Parents abhor its discussion; physicians abhor it as a *bête noir*. Sentimentality and morals aside, the most materialistic of us must acknowledge that sexual purity is wholesome in its effects. The remedy for the evils of youth and early manhood is, never to begin indulgences that create physical and injurious necessities.

In conclusion, my dear Doctor, permit me to state that I am fully aware that I have not adequately discussed the question which you have submitted to me. I fear, moreover, that my reply may be unsatisfactory to you; but I assure you that I am ready to receive more light upon the subject, and am decidedly open to conviction.

Thanking you for your kind consideration and the compliment which you have paid me, I have the honor to remain,

Very fraternally and faithfully yours,

G. FRANK LYDSTON.

ART. II.—Simple Continued Fever.*

By R. A. LANCASTER, M. D., of Gainesville, Fla.

EX-PRESIDENT FLORIDA MEDICAL ASSOCIATION, ETC.

By the term *Simple Continued Fever*, I mean a fever differing from any of the classified fevers of medical authors, and with no constant invariable symptom except that of continued pyrexia. The name is objectionable in that it gives no indication of its etiology or pathology; but until its cause is better understood, and its pathology further investigated, we must be content with a name which does not mislead if it gives no information.

I believe that the materies morbi of this fever is an unclassified germ, entirely different from the germs of typhoid or of malarial fever. The only evidence I have to offer in support of this theory is taken from a clinical standpoint, but I believe the day is not far distant when the microscopist and bacteriologist will sustain this view.

It has been my observation that this fever is more prevalent in spring and early summer, before the advent of our rainy season, and that it occurs more frequently where the surroundings are unsanitary, than where thorough sanitation prevails. I have seen cases which, to my mind, were attributable to neglected privy vaults; to the proximity to wells near the location of stables, cow or pig pens, etc. In proof of the fact that it may be caused by impure drinking water, I have known a family, in which there had usually been one or more cases of this continued fever every year, begin to use, *for drinking purposes*, only water which had been thoroughly boiled, and since then there has been no case of fever, though four years have passed since the exclusive use of boiled water was begun. There has been a very noticeable diminution of cases in Gainesville since the city authorities have provided buckets for receiving the night soil, and have enforced systematic removal of the same.

*Read before Florida Medical Association, in session in Jacksonville, April 4th and 5th, 1893.

The evidence, then, would go to prove that, like typhoid fever, the cause of simple continued fever is of animal origin; but, while its habitat may be the same as the typhoid bacilli, its manifestations are as unlike and as distinctive as are those of variola and varicella, as measles and scarlet fever.

I do not mean to imply that we do not have in this State both typhoid and malarial fevers; indeed, I have had on my visiting list, at one and the same time, cases of typhoid, malarial and simple continued fevers. I have seen typical and fatal cases of typhoid fever in Florida, though as a rule, even the well-pronounced cases of typhoid fever are less severe, and show a larger percentage of recoveries than in the more Northern States. And while Gainesville is comparatively free from malaria, we frequently have patients with the various forms of malarial fever from the adjoining farms of rich hammock lands.

I have never had a case of this "simple continued fever" to terminate fatally; so have had no opportunity to study its pathology. Until physiologists tell us what part of the nervous system presides over the function of heat production, and explain the phenomena of fever, I do not believe that we will discover the pathology of this fever.

Not infrequently the spleen is enlarged and sensitive, and the same may be said of the liver. I have sometimes thought that this may have resulted from a former malarial infection.

The symptoms vary as much as do the effects of a rise of temperature upon different individuals. Who of us has not observed the marked difference in the effects of an elevation of temperature upon one individual and another. Especially is this marked in children. A rise of fever from any cause will make one child restless, nervous and talkative; another will be made dull and inclined to sleep; while another will be delirious or perhaps thrown into convulsions. All these manifestations we have seen in different temperaments resulting from ordinary malarial fever. Just so will the fever under discussion manifest various symp-

toms. It has *per se* but one constant and essential symptom, and that is *pyrexia*. All the other manifestations are the result of pyrexia, and are as varying as are the effects of pyrexia on different individuals.

We must then arrive at a *diagnosis* by a process of exclusion, rather than from any positive symptom. We usually find the temperature of the patient from 102° to 104° F.—it may be a degree higher or lower than the extremes mentioned—with a tendency to run along without much change for two, three, or sometimes four or more weeks. Usually the tongue is more or less furred, but there is nothing pathognomonic about it.

Until the doctor and his medicines become factors in the case, there is usually very little gastric derangement—thus differing from the malarial or bilious remittent fevers. The temperature fluctuates, but with no intermissions as in malarial fevers. Quinine has no effect upon the course of the fever unless given in large antipyretic doses, in which case it may depress temperature temporarily; but it does more harm than good—causing deafness, nervousness, headache, etc., and is less efficacious than other antipyretics in common use. There is invariably a tendency to constipation, but not more so than is to be expected from the drying up of the secretions from increased heat, together with a supine position and inactivity of the patient. There is no iliac tenderness—no tendency to hæmorrhage from bowels or air-passages—no sordes upon the teeth and lips—no delirium or subsultus, as in typhoid fever.

I have often known the appetite and digestion to remain fairly good throughout a three-weeks' fever, and have known patients to eat fruits and solid foods with no bad results. I do not, however, recommend this as a diagnostic point between typhoid and simple continued fever, for it is too much like the directions I once heard given for telling the difference between the poisonous "frog stool" and the edible mushroom—"Eat them, and if you die you will know they were frog stools."

I have every reason to believe that the duration of this

fever is often shortened, and sometimes an attack is aborted by judicious treatment in the beginning of the attack. Its *duration* is from one to six weeks, with an average perhaps of three weeks, though it rarely runs beyond the fourteenth day where proper treatment is begun the first or second day of the fever.

There seem to be good grounds for the popular belief that this fever, as well as other forms of continued fever, is likely to leave on some multiple of the seventh day. I have observed this in a large number of cases, and where there is an apparent exception I have thought that the patient had had fever perhaps for several days before he became conscious of it. Oftentimes there will be an abrupt termination on the fourteenth or twenty-first day with no subsequent rise. At other times the first complete remission will occur on these days—the temperature being normal or sub-normal for one, two or more hours, with a rapidly shortening period of pyrexia each day.

The temperature is usually sub-normal for a portion of the day for a few days after the cessation of fever, and unless the recurrent periods of depression are guarded against there is likely to be a reactionary fever following, and recovery thus delayed. Relapses or complications are extremely rare. In my experience the termination of this fever is invariably favorable. This would scarcely be true if it were, as some think, a mild form of typhoid fever; for we know that even in the mildest form of typhoid fever—the so-called “walking cases”—we not infrequently have relapses or sudden alarming and fatal symptoms to develop.

While the patients often become extremely reduced in flesh and strength, their recuperation is rapid and uninterrupted.

Very frequently after this fever—as I have also observed after typhoid fever—the patient will become more robust than for years previously.

As to treatment, the following formula, modified to suit age, should be used in all cases of fever where not contra-indicated:

R.—Calomel.....gr. ij.
 Powd. ipecac.....gr. ss.
 Bicarb. soda.....gr. x.—Mix.

S.: Repeat every two hours as directed.

I do not as a rule favor routine practice, but I have invariably had such good results from the timely administration of this combination—not only in mitigating but in shortening—and I have good reason to believe in aborting these fevers—that I venture to recommend it here. Of course the calomel is the most important ingredient of this prescription. This dose is to be given every two hours until there has been a full and free evacuation of the bowels.

This formula can be prescribed with safety and benefit in the beginning of either typhoid or malarial fevers; so we need not wait to make sure of the diagnosis before giving it. Even after the first course has been given, these remedies may be repeated from time to time throughout the attack, whenever the secretions need stimulating. After the first one or two courses, however, I usually prefer some other laxative, unless a dry and sticky condition of the tongue and mouth indicates the need of more calomel.

As a means of diagnosis, and also to eliminate any malarial elements which may exist, I usually give quinine the first three days—15 to 20 grains a day. By that time any careful diagnostician, if he has secured a right temperature record, ought to be able to differentiate this from typhoid or malarial fever.

The antipyretics seem to do good in a large proportion of cases—lessening nervous irritability and tissue waste. In some cases, however, especially where there is a tendency to too free diaphoresis, I have thought the coal-tar derivatives did harm.

Sponge bathing with moderately cold water, which has been softened by the addition of ammonia, borax or soda, is often beneficial as well as grateful to the patient; a little cologne water or tincture of benzoin added make it more pleasant still. An ice cap, or, where the hair is not too long, a cold douche to the head will often relieve headache

and lessen fever. Towels wrung out in ice or cold water and placed on the abdomen will often serve a good purpose. Sometimes an injection into the colon of a pint to a quart of *cold* water will admirably answer the double purpose of reducing temperature and emptying bowels. After I am thoroughly satisfied of the diagnosis, I allow my patients much more freedom in diet than is permissible in typhoid fever; however, in all cases of fever the diet should be of a kind easily digested and assimilated.

I append temperature charts of two cases of this fever. The first is a typically mild case, except that the temperature was forced down with antifebrin lower than it would have gone naturally. Age 9 years; date of first call, April 25th; diet: sweet milk, butter milk, stale bread, soft toast; broths and soups; soft boiled eggs, cooked fruit. Treatment: Calomel, ipecac and soda, quinine, 16 gr. three times daily for three days; antifebrin; later, nitro-muriatic acid. Recovered.

Number two was a very severe case; the most critical I ever treated of this fever. The patient was so reduced—so extremely low—that for two weeks it seemed that every day would be his last; but after a very tedious convalescence he was fully restored to his usual health and vigor. Occupation, minister; age, 35 years; date of admission, February 18th, 1888. Recovered.

CASE No. 1.



ART. III.—The Etiology, Distribution and Prevention of Land and Ship Cholera

By **GEORGE M KOBER, M. D.**, of Fort Bidwell, Modoc Co., California.

The home of cholera is in the delta of the Ganges and in other parts of India and the Orient. Epidemic extensions take place by sea or overland by means of persons suffering or recovering from the disease, or by means of infected articles. Cholera is generally introduced into Europe by way of Arabia, Egypt, or the coast of Asia Minor; sometimes it follows well-beaten routes of travel from Persia into Russia and the Continent. In this way, epidemics have visited Europe in 1830, 1831, 1837, 1848, 1852, 1866-67, 1871, 1873, 1884, 1885, 1886 and 1892, and from there the disease generally invades our own continent in the same or following year.

Etiology: Some physicians, among them Guerin and Cunningham, believe Asiatic cholera to be of an autochthonous origin, and that epidemics are not the result of an infectious substance excreted by the patient. They rely for their argument upon the fact that many instances have been observed which could not be connected with a pre-existing case, but we all know how difficult it is to exclude every possibility of infection.

Pettenkoffer is of the opinion that the cholera germ is of an ectogenous character, similar to the germs of malaria, which can only develop and mature into a pathogenic factor, under suitable conditions as regards heat and moisture *in the soil*. According to his doctrine, contact with the disease offers no danger; epidemic extensions on ships, through the medium of the water supply, dejecta and soiled linen, are impossible; restrictions in travel and disinfection of the cholera patients, excreta and effects, are perfectly useless, but attention to the soil which furnishes the local and *seasonal* predisposition is of the utmost importance.

In the recent cholera epidemic in Germany (1892), Munich escaped, and as commerce and travel between that city and those in which the epidemic raged was unrestricted,

Pettenkoffer refuses to believe the escape of Munich to have been due to the non-transport of the comma bacillus to that city. He attributes its exemption to the absence of certain atmospheric and local conditions, necessary to the development of the disease.

On the other hand, Prof. Koch and his adherents—which constitute by far the majority of sanitarians—maintain that the “comma bacillus” is the specific etiological factor of the disease; because, this germ is constantly found in the intestinal discharges of cholera patients, when examined in the fresh state and in the early stages of the disease, and has never been found in other diseases; moreover, inoculations of pure cultures of this bacillus into susceptible animals have produced the disease in question, and several accidental infections by experimenting physicians have been reported from Berlin. Pettenkoffer and Emmerich, in October last, with a view of showing their contempt for the cholera bacillus, actually swallowed a bouillon culture, and the former developed a choleraic diarrhœa, and Emmerich a mild attack of cholera; in both cases the watery stools contained cholera bacilli. Whilst not denying the observation of Bauer and Von Ziemssen—that the clinical picture of these attacks differed materially from Asiatic cholera—we cannot ignore the possibilities that neither subject afforded the necessary individual predisposition; that the bacilli having been cultivated on agar and in bouillon had lost a measure of its original virulence; and lastly, we certainly must admit the occurrence of very mild cases of cholera. The unbiased observer in reading the experiments referred to will naturally conclude that if the train of symptoms, accompanied by reproduced cholera bacilli in the discharges, were not characteristic of cholera, he will be at a loss to account for them in any other way. Indeed, the majority will find in them a confirmation of Koch’s conditions, upon the proof of which alone can it be definitely stated that a particular micro-organism is the cause of a certain disease. They are as follows:

- “1. The micro-organism must be found in the blood,

lymph, or diseased tissues of man, or animal suffering from or dead of the disease.

2. The micro-organisms must be isolated from the blood, lymph or tissues, and cultivated in suitable media outside the animal body. These pure cultivations must be carried on through successive generations of the organism.

3. A pure cultivation thus obtained must, when introduced into the body of a healthy animal, produce the disease in question.

4. In the inoculated animal the same micro-organism must again be found."

Neither Koch nor his adherents have ever claimed that the cholera bacillus is the only etiological factor in the production of an epidemic, but we do aver that it is the one factor without which no case of cholera can occur.

The testimony of all the observers in the recent epidemic in Germany shows that the disease can occur in such a mild form that no suspicion as to its nature would be aroused, were it not for the biological examination; and Dr. Biggs (*Am. Jour. Med. Sciences*, January, 1893), is quite certain that such examinations made by Dr. Prudden and himself were alone the cause of the exclusion of epidemic cholera from New York in 1887, and of the greatest importance in assisting the health department in the outbreak of 1892.

Characteristics and Biology of the Cholera Bacillus: For the purpose of microscopical examinations we should make a cover glass preparation of the intestinal mucus, dry the specimen in the air, heat it over the flame, stain with gentian, violet or fuchsine, and examine for the characteristic bacilli. (See Figs. 6 and 7). Sometimes they are sparsely present, or other micro-organisms may preponderate; in such an event, mix one part of the suspected dejecta with two of alkaline bouillon, and keep in an open glass vessel about twelve hours, at a temperature of between 65°—104° F. The common bacilli will develop colonies near the surface, and small samples prepared on slides as above directed will reveal their character.

Plate cultures should also be made. For this purpose mix a little of the flocculent mucus in a test tube with 10 per cent. lightly alkaline nutrient gelatine, which, after

thoroughly shaking, pour upon the plates. The colonies develop within 24-48 hours, at a temperature of 60° to 65° F., and are circular, with irregular edges, coarsely granular



FIG. 6.

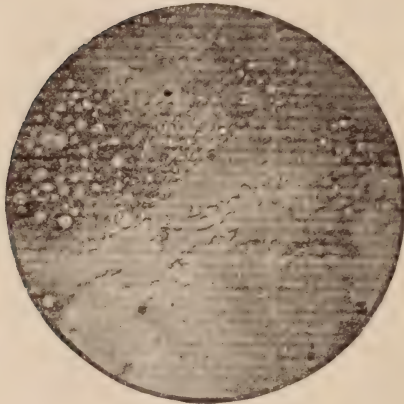


FIG. 7.

and pale. Around the colony there is a zone in which the gelatine is softened, and its surface depressed. The con-

FIG. 6. Cover-glass preparation from a culture of cholera in peptone solution, developed for twelve hours at a temperature of 36°C. (96.8°F.). Magnified 700 diameters.

FIG. 7. Contact cover-glass preparation from a plate culture developed at a low temperature. Amplification about 700 diameters.

tour and general characteristics of these plate cultures vary somewhat, depending upon the temperature under which they were developed, the size of the diaphragm, and whether examined after 24 or 48 hours' growth (see Figs. 1, 2, 3, 4).



FIG. 1.

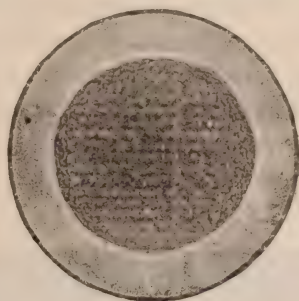


FIG. 2.

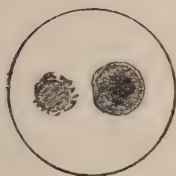


FIG. 3.

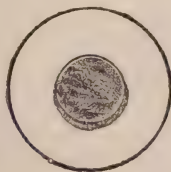


FIG. 4

Every physician should make himself familiar with the details of a bacteriological diagnosis, so clearly described by Prof. Dunham (in the *Am. Jour. of Med. Sciences* for January, 1893).

FIG. 1. Colony of cholera bacilli on a plate culture forty hours after its preparation. Photographed with Abbé condenser and small diaphragm. The refraction of the light by the depressed surface of the softened gelatin around the colony is perceptible. Amplification about forty diameters. Culture obtained from intestinal contents of the first case.

FIG. 2. Colony of cholera bacilli on a plate culture two days old. Magnified about 75 diameters. Small diaphragm.

FIG. 3. Two colonies of cholera bacilli on a plate culture forty hours old. One of the colonies shows an extension of the liquefaction for a short distance beyond the central mass of growth. The edge of the central mass is ragged, and portions of the growth have become detached.

FIG. 4. Cholera colony on a plate culture after liquefaction of the gelatin had begun, but had not extended beyond the colony of bacilli. Photographed with a very small diaphragm. The edge of the colony shows the milled effect described in the text.

As an additional safeguard, Dunham advises that as soon as the colonies upon the plate cultures have grown enough to develop their characteristic appearance, material from them should be used to make gelatine tube-cultures. The culture medium is prepared from a cold aqueous extract of lean beef, to which one per cent. of peptone, one-half per cent. of salt, and ten per cent. of gelatine are added. The tube is inoculated and exposed at a temperature of about 70° F. After three or four days, a funnel-shaped colony or "hanging drop" preparation will be observed, with the base towards the surface of the tube. (See Fig. 5.) By means

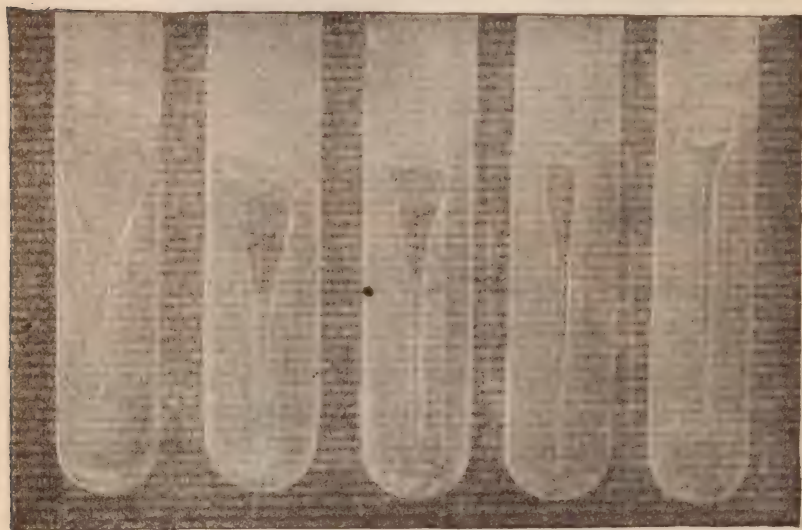


FIG. 5.

of a sterilized platinum wire, a portion of this colony is transferred into two cubic centimetres of a sterile solution of one per cent. peptone, one-half per cent. of salt in distilled water, placed in the incubator at about 96.8° F. for

FIG. 5. Gelatin tube cultures of cholera from the first case (McAvoy), one, two, three, four, and six days old. Temperature during development about 70°F. The culture medium was prepared from a cold aqueous extract of lean beef, to which 1 per cent. of peptone, $\frac{1}{2}$ per cent. of salt, and 10 per cent. of gelatin had been added, according to the methods usual in the Hygienic Institute in Berlin. The reaction of the gelatin was faintly alkaline.

six hours; or, if kept at a temperature of 70° F., then at the expiration of twenty-four hours examine the form, arrangement and motility of the individual bacteria of these "hanging drops." After this, pour a few drops of concentrated strictly pure sulphuric acid down the inner surface of the tube, so that a layer of the acid is formed below the culture. Watch for the "Bujwid-Dunham Re-action," marked by a distinct rose tint, sometimes tending towards lilac. By means of these methods, it is absolutely possible to diagnose Asiatic cholera from cholera morbus, cases of arsenical poisoning, etc.

It is quite true that micro-organisms, similar in appearance to the comma bacillus have been found by Finkler, Prior, Lewis and Miller, but they are never identical, and can be readily distinguished by the plate and tube cultures.

Whilst the comma bacilli develop best in contact with oxygen, they do not cease to multiply by exclusion of the air; they develop best at a temperature between 86° to 104° F.; a temperature below $+60^{\circ}$ F. arrests their growth, but even a temperature of -14° F. does not destroy their vitality; they are effectually destroyed by drying (an argument against aerial transport in a dry climate); also by a temperature of 190 to 212° F. Exposure to a five per cent. solution of carbolic acid, or 1:500 solution of corrosive sublimate, also the normal gastric fluid, will kill the germs. Cholera germs may multiply in suitable soil, at a depth of ten feet; when heat and moisture are present, they do not develop spores.

Uffelmann (*Berl. Klin. Wochenschrift*, 1892, No. 48,) has shown that the bacilli remained viable in water for from five to six days; in milk, for about three days; on the surface of bread exposed to the air, for about a day; between slices of bread kept more or less moist, for eight days; in butter, for three days; on cooked meat kept moist, for eight days; on apple and cauliflower, for four days; on paper, for about one-and-a-half days; on copper and silver coins, for only ten minutes, after thorough drying; on dry clothing, for four days; but on moist linen, for twelve days, or even longer.

It was shown that for two hours after walking through cholera dejecta, house flies were capable of infecting nutrient media, and that the dry skin of the hand preserved the germs alive for somewhat more than an hour after contamination. In decomposing fæces, they remain viable for one to two days; in exceptional cases, for three to fifteen days.

Pathogenic Action.—There is every reason to believe, that the pathogenic effects of the cholera bacilli consist in the production in the digestive tract of ptomaines (cadaverin and putrescin) which cause the primary lesions, and also, after absorption, other toxic effects.

The germs most likely gain admission through the digestive tract and multiply there, as evinced by the intestinal lesions, the presence of the bacilli in almost pure cultures, in the dejecta, their absence in other parts of the system, and the improbability of transmission through the air.

Mode of Infection.—Water and food are doubtless the most common media for the transmission of the germs. The histories of cholera epidemics afford abundant evidence on this point. Of course, there are instances where the evidences are far from conclusive, but nevertheless suggestive, that the water supply was the principal source of disseminating the disease. To-day, evidence is still wanting as to the source of the first case of the disease in the recent Hamburg epidemic; it is believed, however, that the germs were brought from Baku, on the Black Sea, and found their way into the city water supply. This can be readily accounted for, when it is understood that the water supply is derived from the River Elbe, that the sewage of the city is poured into this stream, and that the ebb and flow of the North Sea are perceptible at the source of the supply, virtually permitting diluted sewage to be pumped into otherwise defective reservoirs. The epidemic was limited to Hamburg, almost sparing the neighboring cities of Waldeck and Altona, exposed to the same climatic conditions, and probably also of soil, but having their own separate water supplies. (Reiche; *Am. Jour. Med. Sciences*, Feb., 1893.)

But what is more, Posner informs us that the cases of

cholera which occurred at Altona, developed in those houses in a certain street which were supplied with water from Hamburg, but passed over those houses receiving water from the Altona water supply. (*Ber. Klin. Woch.*, 1892, No. 48.) Plate cultures of the Hamburg water supply failed to demonstrate the presence of cholera bacilli. But the general facts, as well as Krapelin's studies of the fauna of the Hamburg reservoirs, showing that they furnish conditions most favorable for the existence of vegetable and animal life, indicate that the water supply was the principal factor in disseminating the germs.

According to Reiche, mild attacks of summer diarrhœa were of frequent occurrence in the weeks preceding the outbreak, and these, whether due to an impure water supply or meteorological conditions, naturally favored individual predisposition. Mitra, in describing the cholera epidemic in Kashmir in 1892, says: "The population is crowded into 25,000 low, dirty houses, built irregularly on narrow lanes and alleys, which are used as latrines. There is no drainage, and the storm-water washes the filth and ordure into the Nalla Mur, and into the river from which the drinking water is obtained."

There are striking instances on record (see Simpson, *Ind. Med. Gazette*, May, 1887,) to show that the germs have been transmitted through the milk supply, which had been diluted with water from infected sources. Articles of food, as has been shown above, may be the carriers of the germs, the result of having been handled with infected fingers, washed with infected water, or conveyed by infected insects. Nurses and laundresses frequently infect themselves by means of their fingers carelessly introduced into the mouth. The possibility of transmission of the germs by means of clothing, linen, effects and merchandise should not be underrated.

The importation of the disease by means of infected persons plays, of course, the most important rôle in the distribution of the germs. The epidemic of 1884-5, in Spain, was brought to Allcante by the "Buenaventura," which landed passengers—among them a child sick with cholera.

The pilgrims to Mecca have been known for years to be carriers of the disease; the first cases of the epidemic at Havre, in 1892, came from the suburbs of Paris. (Gilbert.)

Influence of the Soil, Local and Seasonal Predisposition.—It is certainly true that a peculiar constitution of the soil, in many localities, favors the development of the germs, and there are localities which appear to prevent epidemic extensions; and this is even true of some parts in India. Pettenkoffer claims that a porous soil, more or less polluted with organic matter, and possessing a certain degree of moisture, is absolutely essential for the development and maturity of the cholera germ. If the soil is too wet, as at Lyons, it cannot mature; if too dry, as at Multan, the same result may be expected. He also points out that houses erected on ridges enjoy greater immunity than those situated in depressions; that low-lying districts are visited in preference to higher elevations, and that proper drainage has exerted a most beneficial influence in the prevention of the disease. These facts cannot be denied, and certainly show that, in addition to the specific germ, we have to deal with local predisposing factors.

It does not follow, however, that this influence depends *solely upon the soil*, for it is equally possible that the *water* may favor or prevent the development of the germs; the locality may not be supplied with wells, or if so, the arrangement of privies and drainage may prevent access of the germs into the water supply; nevertheless, it is fair to assume that the constitution of the soil, just as in typhoid fever, may favor or retard the development and final percolation of the germs into wells.

In addition to the influence of the soil and water supply, the *seasonal or climatic disposition* cannot be ignored. In Europe and in this country, most of the epidemics present the greatest intensity during the late summer and fall, and subside with the approach of cold weather, possibly to return the following summer. It has also been observed that, after the first showers of rain, succeeding a warm, dry season, the extension of the disease was greatest, whilst prolonged rains diminished their intensity. It is evident,

therefore, that the specific germs attain their greatest virulence when the temperature of the air, and consequently of the soil, is just suitable, and that a combination of a certain degree of heat and moisture constitute suitable environments for the cholera virus. The rise and fall of the ground water, which fluctuates with the rainfall, not only influences the proliferation of the germs, but also their transport into the well-water and the degree of impurities contained therein. The rise and fall of the ground water naturally influences the ground air, and, whilst the germs may be borne by ascending currents, in the light of their biological character, such a mode of infection seems doubtful.

Individual Predisposition.—What constitutes this mysterious factor in the production of the disease? Is it a weakness of the organism, a diminished power of resistance, or is it a peculiarity of the tissues, cells or fluids, which places them at a disadvantage in their struggle against the invasion and effects of these germs? Is it the addition or subtraction of a certain something in the blood or fluids, which furnishes a suitable pabulum for their growth? These unexplained questions cannot be ignored in the consideration of the contagiousness of certain bacteria, like those of cholera, typhoid fever, diphtheria, dysentery, etc.

All we know is, that infectious diseases differ more or less, like other diseases, in degree; that there are mild and malignant cases, and it is not improbable that immunity in certain cases is due to the inaptitude of the organism to feel the effects of the ptomaines evolved by the microbes; that germs of infectious diseases may exist within the body, and the disorder they give rise to may be very slight, or entirely absent. In brief, infectious disease does not exist merely because some noxious micro-organisms have taken their abode in the system; they exist because functional or structural troubles are brought about, through the agency of ptomaines.

Klemperer (*Berliner Klin. Wochens.*, 1892, No. 39), with sub-cutaneous inoculations of the cultures of cholera bacilli, claims to have succeeded in conferring upon man immu-

nity to cholera, as indicated by the protective influence of the blood serum of the immune individual upon guinea-pigs, in a degree proportionate to the virulence of the protective inoculation. He was also able to demonstrate that some persons possess a natural immunity to cholera, much less in degree, however, than the immunity artificially conferred. Dr. E. O. Shakespeare, of Philadelphia, has announced a paper on this subject, to be read before the Association of American Physicians, in May next.

Clinical experience teaches that faulty nutrition, debility, digestive derangements, particularly gastric and intestinal catarrhs, alteration of the gastric juice from an acid to an alkaline or neutral reaction, debauches, improper food, especially raw, decayed or unripe fruits and vegetables, and excesses of all kind, favor the development of the disease. Mental anxiety and fear also help to depress the physical and mental elasticity, and correspondingly our power of resistance.

One attack of cholera affords, for a time at least, immunity; no age is exempt, although it attacks most frequently persons between the age of 15 and 30 years.

Ship Cholera.—One of the strongest arguments against Pettenkoffer's theory, that it requires a *suitable soil* for the development and maturity of cholera germs, is the occurrence of outbreaks on sailing vessels and steamers.

Koch, in 1872, reported eight instances; in 1873, the same number, and in 1874, twenty outbreaks of this kind.

In 1884, cholera broke out on the steamer "Matteo Bruzzo," from Genoa to Montevideo, and attacked forty persons. This steamer returned to Genoa without having been permitted to touch land. The steamer Moravia, which sailed from Hamburg August 16th, 1892, reported twenty-two deaths during the voyage from "gastro-intestinal disorders." Cholera was first recognized at Hamburg on August 11th. The "Normania" and "Rugia" reached New York, from the same port, September 3d; each of these reported a number of deaths at sea from cholera, and arrived with four cases on the "Normania" and five on the "Rugia." Later, the "Scandia," "Heligolann," and

"Bohemia," all from Hamburg, arrived and reported deaths at sea from "gastro-intestinal diseases."

The Incubation Period of Cholera is usually from one to two days; the maximum period scarcely exceeds seven days; and whilst we can readily admit that all cases attacked within seven days after leaving the port, imbibed the germs on the land, it is equally reasonable to assume that those attacked at a later interval, imbibed the germs on board, and that they must have attained their virulent character without the intervention of the soil.

The Prophylaxis of Cholera: Conflicting theories as to the etiology of the disease have unfortunately resulted in different views regarding preventive methods. Pettenkoffer and his adherents, as before stated, do not believe that the dejecta of cholera patients contain a matured pathogenic germ, and that they can be conveyed in the drinking water; and therefore regard it as wholly unnecessary to restrict intercourse or to disinfect the dejecta, clothing and effects of patients, or to boil the drinking water. They insist, however, upon proper drainage of the locality, prevention of soil pollution, and the removal of the "individual predisposition" by improving the general nutrition, avoidance of catching cold, allaying fear, and proper attention to the cutaneous function.

Koch and his followers, whilst fully appreciating the importance of other predisposing causes, believe the common bacillus to be the one factor, without which no case of cholera can occur; they believe that this germ is found sufficiently virulent in the dejecta of patients, and is capable, when introduced into the digestive tract of a susceptible individual, of producing the disease in question. This school looks upon the first cholera patient as the chief source of danger in spreading the disease, and with a view of preventing at the outset the introduction of the poison, they insist upon prompt recognition and proper isolation, and that no suspicious case should be permitted to enter our ports or cross our borders.

Under these circumstances, the safety of our own people demands the careful inspection and disinfection of all pas-

sengers and effects, prior to sailing from foreign ports, and this should be done by competent physicians, representing the Pan-American Governments. The vessels carrying passengers should be perfect in their sanitary appointments, and provided with pure drinking water.

Dr. Wilcox, in describing the cholera of 1892 in New York (*Am. Jour. Med. Sciences*, January, 1893) remarks;

"On August 19th, on information that the disease was suspiciously near the German frontier, the Department of State was requested to make inquiries through consuls to ascertain if cholera existed in Germany. On the 23d, having received reports from Bremen, Hamburg and Stettin, the two latter being unsatisfactory, the Hamburg-American Steamship Company was notified by the health officer to use great caution to disinfect baggage and clothing, and detain passengers at Hamburg for five days. How far these orders were carried out was ascertained on the arrival of the "Moravia" on the 30th, when it was learned that the immigrants had embarked immediately upon the arrival of the train, and that there had been 22 deaths among 24 patients, the first case occurring on the first day after leaving Hamburg. It is evident that cholera gained its entrance into New York harbor solely by the negligence of the Steamship Company.

The disease can be stamped out on shipboard in five days by competent medical officers, and should be done at sea. Under the direction of the health officer it was done in every case after the steamships came under his jurisdiction in New York harbor. The sick and dead were removed. The immigrants received baths, having been previously rubbed with a bountiful supply of green soap. A sail, suspended by the four corners, the water being constantly renewed, was an excellent, though an improvised bath-tub. The crew's quarters and the steerage were scrubbed and washed out with a 1:500 solution of corrosive sublimate. The fumigation with sulphur was carried out. The baggage and clothing were disinfected by sulphur, superheated steam, and, when injury would not be done, by corrosive sublimate solution. Soiled bedding and clothing were wrapped in sheets wetted in corrosive sublimate solution, and burned in the furnaces. Lastly, fresh water was supplied and only used after boiling. Proper regard for the lives of passengers demands that this work shall be done at sea."

With proper quarantine regulations, and the hearty co-operation of State and National authorities, it would seem possible to prevent entrance of the germs by the coast. If, for any reason, the disease should gain a foothold, the difficulties of establishing a land *cordon sanitaire* would, of course, be great, as they are often broken through. The disease, however, shows a predilection for well-beaten routes of travel, and the State of California, apart from the marine quarantine, upon the approach of danger, should not fail to establish inspectors at our border railroad and highway stations, with a view of detaining and caring for all suspicious cases. This, of course, requires suitable equipments.

Let it be remembered that the recognition of the first case of cholera is of vital importance in preventive medicine. Every suspicious case should be treated with precautionary measures, until the diagnosis has been confirmed or rejected. The patient should be isolated, and the nurse instructed how to disinfect the dejecta and soiled effects, and to protect himself. Muriatic acid, 1 part to 5 parts of water, or 1:500 solution of corrosive sublimate, allowed to remain in contact with the dejecta for one hour, will prove most efficient in destroying the germs. A three per cent. solution of carbolic acid, superheated steam, dry heat 212°F., are proper disinfectants for clothing, linen, bedding and effects. The floors should be scrubbed and washed with the sublimate solution. Nurses should be warned of the danger of carrying the germs by means of the fingers to the mouth. In case of death, the body should be washed, if at all, with the sublimate solution, but preferably wrapped in sheets wetted with the same. Soiled bedding and clothing should be wrapped in sublimated sheets, and burned. No articles of food, or effects of any kind, should be removed from a quarantined house or station, except by permission of the health officer.

Upon the approach of cholera, the public should be instructed how to guard against the disease, by proper food, avoidance of fear, indiscretions in diet, debauches, and excesses of every description. None but the most wholesome food, properly cooked, should be consumed. The water and

milk should be boiled before drinking. The addition of one per cent. of citric acid or 1:1000 of muriatic acid to the water, to be kept in porcelain receptacles, has been recommended. The hands should be frequently scrubbed with soap and brush, especially before meals, and the system should be placed in the best possible condition to resist the disease. For my own part, I believe that immunization, by inoculations of cultures of cholera bacilli, will constitute, sooner or later, a most important individual prophylactic measure.

Apart from all this, proper drainage and sewerage, prevention of soil pollution, a good water-supply, cleanliness within and without the premises, disinfection of water-closets and privy-vaults, gutters and court-yards, in fine, suitable sanitary environments, cannot fail to have a most beneficial effect in the prevention of cholera, as well as in all other infectious diseases. The efficacy of these measures is often evident within a very few days.

ART. IV.—Mastoid Disease—With Report of a Case of Mastoid Abscess.*

By JOHNSON ELIOT, M. D., Washington, D. C.

Miss B., white, age 63 years, previous health good, was referred to me by Dr. Llewellyn Eliot. Early in January, 1892, pain occurred in the right ear, followed by profuse purulent discharge.

Seen February 1st, 1892. Ear painful, interfering with sleep; there was tenderness over the mastoid process, hearing nil, small perforation in the posterior inferior portion of the membrum tympani through which this discharge escaped. Under the use of peroxide of hydrogen and the insufflation of boracic acid, the discharge ceased, but the perforation did not close; although sedatives were used, the pain abated little; the hearing increased $\frac{1}{50}$.

On February 23d, a mass of granulations appeared at the perforation, and five small ones were removed; the dis-

* Read at a meeting of "The Medical and Surgical Society of the District of Columbia," held March 13th, 1893.

charge recurred a few days before the appearance of the granulations.

Early in March she had fever, with hectic flushes; was given stimulants and the muriated tincture of iron. Pain was now very severe over the mastoid process; the tissues became swollen, the swelling extending over the neck and slightly over the cheek; ptosis was marked, and there was stiffness of the temporo-maxillary articulation. The appearance and feeling of the face suggested erysipelas, which was suspected; the hearing was entirely lost.

In consultation on March 15th with Dr. L. Eliot, it was decided to open the mastoid cells; this we did on the same day. Under the anæsthetic influence of a 4 per cent. solution of hydrochlorate of cocaine, a Wilde incision about $2\frac{1}{2}$ inches was made over the mastoid. This not being satisfactory, a short incision was made at right angles to this, converting the wound into a T incision; the bone was exposed and drilled; a few drops of pus escaped; necrosed bone being detected, two more perforations were made, and the bone between these perforations broken, thereby making a free outlet. Possibly a teaspoonful of pus now escaped.

The wound was treated antiseptically and allowed to granulate. A communication was shown to exist between the mastoid cells and the tympanum by the passage of fluids. Reaction was good; given morphia sulphate, gr. $\frac{1}{4}$. She passed a good night and was free from pain within a few hours of the operation, yet a sense of soreness remained. The wound was treated with peroxide of hydrogen; the administration of iron and stimulants continued with beef extract.

March 20th, sharp pain in the ear; wound gently probed, and a small piece of necrosed bone removed; hearing distance, $\frac{3}{50}$. Sulphide of calcium, gr. $\frac{1}{4}$, three times daily was administered.

No notes of interest after this; the hearing gradually increased; wound healed by May, 1892, when hearing was $\frac{30}{30}$; perforation in drum closed; no discharge. The only symptom remaining was tinnitus, which continued several months, when it ceased.

Miss B. was seen March 12th, 1893; health has been good since operation; no return of any of the former symptoms; hearing watch-test $\frac{41}{50}$; wound has filled, but leaves quite a scar.

As a matter of general interest, I have looked up the

literature of the subject, and present briefly the result of the research.

The first recorded operation of opening the mastoid cells is that of Johannes Riolanus, in 1649, undertaken for the relief of deafness and tinnitus, caused by obstruction of the Eustachian tube; the idea being to establish ventilation of the tympanum. The operation was opposed by Morgagni. About 1750, Petit first performed the operation for caries, using in one case a chisel and mallet, and a bone perforator in another, evacuating pus from the cells.

Jasser, in 1776, opened the mastoid with success in chronic otorrhœa. In his first case he, by accident, broke the bone with a probe, and later, in the same patient, opened the other mastoid with a trocar; the report of his cases caused abuse of the operation.

In 1791, Kölpin operated on Baron von Berger for deafness and tinnitus; death occurred on the eleventh day from suppurative meningitis. The operation now fell into disuse; an unsuccessful attempt was made to revive it by Dezeimeres in 1830.

Forget, in 1849, and von Tröltsch, 1861, succeeded in again directing attention to it. It was now advocated by Crosby, Turnbull and Post in the United States; Hinton in England; Triquet and Follin in France; Mayer and Jacoby in Germany. The first successful case in America was reported by Turnbull in 1862.

From this time the operation was established—Wilde's incision generally being adopted, and the bone perforated with chisels, trocars, trephines, and other instruments, following individual preference.

The mastoid process varies much in form and structure. In childhood, it consists of a flattened tuberosity, containing but one cell of considerable size; the cavity is near the surface of the process, and is separated from the external periosteum by a thin plate of bone, often perforated by a large opening, for the passage of the emissary veins. It is through this opening that pus is often discharged. At the age of five years, the mastoid assumes the features of an

adult's, with the exception that it is smaller and less dense. It is a honey-combed structure, lined by an extension of the mucous membrane of the tympanum, the cells varying in size. Zuckerkandl states, there is no relative proportion of the size of the cells to the size of the mastoid. In an examination of 250 mastoids, he found 36.8 per cent. entirely pneumatic, 20.4 per cent. diploetic, while in 42.8 per cent. the two were mixed.

The boundaries of the mastoid are, superiorly to within one-half inch of the temporo-parietal suture, the periosteum on the outer side, and interiorly it is separated from the dura mater by a thin plate of bone, one-twenty-fifth to three-twenty-fifths of an inch in thickness. Anteriorly, the pneumatic cells extend over the external auditory meatus, and, posteriorly, they end near the temporo-occipital suture. Hyrtl found three out of 600 skulls where the cells extended to the occipital bone. The antrum lies near the center of the cells; it opens into the tympanum; its surface, with the exception of the roof, is honey-combed by the opening of the pneumatic cells; the roof is formed by a thin bony plate, separating it from the dura mater; the lateral sinus lies three-twenty-fifths to six-twenty-fifths of an inch from the posterior extremity of the antrum, and about three-fourths of an inch from the outer surface of the bone. Agnew was compelled in a case to penetrate five-eighths of an inch. Körner, 1886, and Schülzke, 1889, are in opposition as regards the relation of the sinus and cerebral fossa to the shape of the head—Körner holding that, in broad heads, they were more favorably situated for operating.

Inflammation may extend to the brain through the petro-squamous fissure, the internal auditory meatus, the tegmen tympani, the aqueduct of the vestibule, the hiatus Fallopii, by the canals of Verga and Maas. The redness, tenderness and swelling over the mastoid, may be explained by the assumption that inflammation follows the emissary veins.

In all severe cases of inflammation of the middle ear, there is more or less involvement of the mastoid. We may

have inflammation of its periosteum or caries, with formation of abscess in some part of the cavity, the first often arising from acute catarrh. Caries and necrosis, when found in the mastoid, are due to imperfect removal of pus. Sclerosis and hyperostosis sometimes result from mastoiditis. Pain, tenderness, redness and swelling in the mastoid region, direct us in making a diagnosis. In a child of four years, the pain was absent. Neglected cases may discharge externally, and relief be obtained. Pus may be carried through the mastoid vein, and enter the lateral sinus, causing pyæmia. Paralysis of the seventh nerve may occur on account of its passing through the Fallopiian canal. Erysipelas and abscess of the neck, and also brain symptoms, may develop.

Cases of congestion and periostitis of mild type usually yield to a few leeches, followed by poultices. If these are not effectual, a Wilde incision should be made. Slight hæmorrhage occurs from the posterior auricular artery. The depletion will be beneficial, even though pus be not present. It is best not to delay the operation after the diagnosis has been made, in the hope that necrosis will cast off the bone.

Anodynes and leeches do not relieve the pain, which is increased by firm pressure.

Often, where there is a purulent discharge into the external meatus, we find granulations.

In the more severe cases, after making an incision to the bone, immediately back of the auricle, an opening into the bone should be made; or, if an opening exist already, it should be enlarged. An ordinary dressing should be used, and the wound allowed to granulate from the bottom.

In regard to the after-treatment, Schwartze, using mallet and chisel, and leaving a lead nail to act as a drain, has his cases heal in about eight months. Buck, using a drill, discarding drainage tubes, has the wounds heal in forty days.

Sulphide of calcium seems to exert an influence over suppurative diseases of the ear as well as elsewhere.

No. 1417 N Street.

ART. V.—The Influence of Immaturity and Degeneration in
Some Forms of Thinking — Especially Sexual
Thinking.*

By DeWITT WEBB, M. D., of St. Augustine, Fla.

Some time since an article appeared in a widely circulated journal, devoted to many phases of reform, from the pen of a widely known clergyman, in regard to some forms of amusement. The article appeared to me to show such a state of mind on the part of the writer as to call forth an indignant protest. In the short correspondence which followed, it was clearly evident that the writer neither could or would look at any point of view but his own, and I said to him, "If it were the true view, then men were not fit for the society of women." I have seen more of the same sort of ideas in print since, which leads me to lay the present paper before you, which, while it will contain nothing new, can bear well the force which comes from repetition.

We are all acquainted with the *faults of immaturity in regard to sexual thinking*, and are familiar enough with the inexpressible vileness of thought and speech in boys and girls, who have gone wrong at or near the age of puberty, before nature has had time to become balanced and passion take its proper place among the great forces of life. About this age we rightly throw all possible guards, until the control of the judgment shall be established, and until in full manhood and womanhood the entire physiological structure will, like any other machine, work altogether in rhythm. We choose their associates, we guide their reading, we warn against improper practices, and strive to bring them up in mental and moral health, knowing full well that if we do not, there will be an early failure of physical and mental powers, and a complete wreck of all fond hopes of family and friends. This condition and its necessities are familiar to all, not alone to the physician, but to all intelligent people, and fully appreciated.

* Read at the meeting of the Florida State Medical Association, April 5th, 1893.

This condition, however, only affects the individual, and our efforts are directed towards the prevention of the excesses of the immature, or to the quick suppression, if possible, if already begun. There is going forth from these young people gone astray little that influences society, for society recognizes the evil and meets it as best it may.

It is not my purpose in this paper to deal with this condition of the very young, but rather with *the mischief which comes from a thinking, and a consequent utterance, the result of senile degeneration in the nerve centres, which often passes for the inspiration that comes from the highest morality*. I speak of morality in the narrow and restricted sense in which it is so often used by the English speaking world, viz., the proper relation between men and women.

It is easy to understand how, through the age of maturity for both men and women, when all the powers are in full balance and accord, when passion is tempered by regard, by comradeship, by a community of interest in pleasure and pursuits, when its object is glorified, and when, indeed, for the greater number of the youthful associates, there is for him or her little or no passion, but comradeship alone, the relations of the young may be comparatively free and yet correct, because of proper self-control and self-respect, and respect for one another. This is the healthy and normal condition of adult men and women.

As years go on, the change which comes with the passing of time takes place, and to many the change of approaching senile degeneration comes early, and shows itself as surely, although not so often recognized, as in the foul thinking of immaturity. The mother's instinct tells her that her daughter is safe with her companion of twenty, but the same mother would make very careful inquiry if her escort was past middle age.

The subject under our consideration receives its importance, not so much from its consequences to the individual, as from its effect upon society—its thoughts and its conduct, because the kind of thinking the result of nerve degeneration, is given to the world, and by a large number accepted

as the result of a deliberate and carefully formed judgment; so that a pathological condition, the result in some of advancing years, which leads to the exclusion of all but the lower forms of sexual thinking, assumes only the same low plane for the thinking of all the young men and women in their association. To these mentors, the dance is only a field for the exercise of unlawful desire, and but for the good sense of the young people themselves, and the healthy instincts of the mothers of the girls, a great part of the pleasure of young society would be destroyed. For it must be remembered that a great part of the plea of these moralists goes on the assumption that the girl lives among the young men, her companions, surrounded by an atmosphere of unlawful desire uncontrolled in them by any sentiment of either honor or comradeship. Of course, to such a man the dance is simply an invention of the evil one, and all gatherings of young people but so many opportunities for sin.

Now, all this will fall harmless on our ears if we will but remember that such a man has forgotten his youth; that instead of his sayings being the result of a ripened judgment, they are rather the evidence of a premature change in nerve tissue, for which his own life in the past may or may not be responsible, but which should lead us to give little weight to whatever he may have to say.

It is curious to note how the change in men's thinking follows the changes sometimes incident to age. We are more observant of the change in women, because when it appears, the effect upon the acts and conversation are more apparent from the sharp contrast with previous life and conversation; but we treat nymphomania as a disease, and never for a moment think of holding the woman responsible for words and acts which would have shocked her in other days.

So, when we read an article by some man from whom we should expect better things, which shocks us by its insult to the conduct and intelligence of the young people, we may remember that changes have been going on in the

nervous system, which have brought on this change of thought.

It seems to me that our profession, familiar as it is with this trouble in older men and women, ought, in the best interests of society, to let it be known that one is just as much an evidence of diseased state as the other; and the teaching of a prurient morality is often, instead of a vice, only an evidence of a physical state deserving of our sympathy and care. The trouble is, that the vaporings of a diseased brain pass for sound moral teaching, and many people are made miserable and think they are doing wrong when they should feel like resenting an insult to their good sense.

I do not mean to be understood that this state of mind implies profligate life. On the contrary, the life has often been one in which the natural instincts have been repressed, and it would seem as if this lifelong effort had sometimes the same effect, as to vice of thought, as a profligate course of life might have done. But little harm would result if this were generally understood by the mass of readers, but a great deal of harm results when, instead of taking it at its right value (which is *nil*), it is taken for law and gospel because of the supposed authority from which it issues.

Physicians are not bound (except as good citizens) to be the especial teachers of morals; but in all the teaching which has a physiological and pathological basis, they should not fail to make their voice be heard.

The general public is very far, even yet, from understanding the full force and scope of the phrase, "A sound mind in a sound body." It would seem as if it had been nearer attainment among the Greeks than before or since, and this is the common judgment of the world. Healthy thinking can only come from healthy living, and so very much that has passed and is passing to-day as proper moral teaching, is only the result of a diseased state, and so is very far from the truth.

As we would not think of following the advice of senility in other things, why should we in this, and handicap the

proper and ordinary progress of the race? This unhealthy thinking would rob our art galleries of some of their choicest treasures.

The very first consideration for those who look for the physical advancement and better health of the race of mankind, is a better and clearer understanding of the proper relations of men and women. Can it be doubted that the proper class whose voice should be listened to as speaking with authority is that of the doctors rather than of the professed moralists, who for so long have held the ear of the world, often teaching for doctrine the commandments of very one-sided men? The truths of physiology are known to and are to be taught to the world by the physician—taught plainly with a cleanness of thought and speech apparently impossible in any other class of men.

Modern life holds in itself the greatest possibilities for the future. Open and free-air living cannot be promoted by the prevalence of ideas born in the brains already feeling the degeneration of a premature age, often unsuspected by the writer or his reader. The world of men and women must grow up together, and the future must see, if possible, a better social relation.

The priests in the new world must be the men and the women of the medical profession, rather than those of any other profession, for they will teach a physiological basis of the one phase of morals, which prolongs to their sphere of life. It will not matter if it shall run counter to what has passed as the proper teaching for the ages that have gone. It will teach not of repression and retreat, but of self-control and victory. Young men and young women shall learn from the doctor what they have not been able to learn from the priest, viz: That in amusements and business, it is possible to have a proper freedom of manners without loss of self-control and self-respect.

The French novel we rightly call vile, is the product not of the young brain, but of the old brain already degenerating, and the progressing vileness of the succeeding volumes may in most instances be marked by the advancing years

of the writer. It is the same trouble taking another form, but we are careful that the immature shall be kept, if possible, from this kind of literature.

I think we ought also to guard our immature young from those who would accentuate sex. To these moralists a woman is always "one of the opposite sex." Their thinking has corrupted even their power of proper expression. It does not help matters that the object of their writing may be good.

Tolstoi is a great genius, and an ornament to literature and to humanity yet his "Kreutzer Sonata" is a vile, as well as a very stupid book, utterly unworthy of the writer, and one it would have been impossible for him to have written in his earlier days. The very writing of such a book is, to my mind, an evidence of nerve degeneration. So when a professed moralist shows by his writings that he has an unclean imagination, the result of ageing, let his writings pass at their real value, and nobody will be harmed. On the contrary, if these utterances are taken as the expression of matured wisdom, then great harm comes. It seems strange that premature impotence should have such an effect upon the imagination.

The physician as the scientific observer of human life, its environments, its limits, its results, is very often its natural priest, whether he will or no. If society is to come to a better, clearer and cleaner thinking upon these subjects, it must come through the profession of medicine, and not of theology, strange as the statement may appear. We shall then have a cleaner thinking, because of a better understanding of both physiology and pathology, and will make no distinction as to throwing the mantle of charity over both men and women, when age shall have dulled the perceptions and thrown the delicate organism of the nervous system out of tune.

Is it too much to ask of our fraternity that, so far as in them lies, they shall add to the already great burden which society lays upon them, to aid in bringing society into a more natural state of thought and behavior? As nobody knows

so well as our own profession the full force of all the great instincts that are fundamental to society, so no others know so well how strong a healthy self-restraint can make men and women; or how silly is that teaching which seeks to hide a passion from its possessor, so that when it is once awakened it shall defy restraint and end in destruction.

Physicians are no better than other men; yet they are trusted (and rightly so) by society not to abuse their trust. Shall it be said that others cannot be brought to such a state as also to be trusted? And yet this was exactly the illustration in the case first referred to, as the writer said, "No matter how true it might be as regarded physicians," and he was kind enough to add "and artists," "it was not true of other men."

Now this is not a lecture on morals. I simply wish to show that as physicians we believe that a right education makes it possible to have right thinking, and in this teaching neither the immaturity of youth or the senile degeneration has any place. The one is just as fatal to right understanding as the other. It does not matter that it has passed for many centuries as the teaching of the accumulative wisdom of the ages, it is none the less pernicious and false. Its tendency is inevitable to lead the young man away from his natural and higher thoughts toward his gentle companion, and to teach him that his regard is but lust for her person; and on the part of the young woman, to lead her to think that her pleasure in her companion's society is a sin, and that she is surrounded by a circle of young men to whom her presence is, at all times, only a temptation, intensified by her every adornment and grace.

In conclusion, I would only say that while our profession is not held responsible as a teacher of morals, yet it is quite within our sphere to impart that instruction which comes from a knowledge of physiology and pathology, and so, in fact, to place on a sound and substantial basis, some of the conduct which comes within one phase of morals of daily life.

It is a strange thing that age should pass from a higher

to a lower form of thought, and yet the bald-headed front row of the ballet is matched by the moralist who cannot see in the natural companionship of young men and women anything but the gratification of unlawful desire. To his mind there seems to be no such thing as self-control. His consciousness that his own thoughts run entirely on the lower plane is to him sufficient evidence that all others are like his own. He excepts "physicians and artists," because common decency compels him to—often, I believe, with a mental reservation, but he puts all other men on his own level.

If it is true that "physicians and artists" only can lead lives of clean thinking, then it is high time we started to lift the remainder of mankind to as high a level as our own, by giving them the plain teachings of the scientific basis of these phases of morals.

ART. VI.—Drainage after Abdominal Section, with Report of a Case—Weight of Tumor Removed 77 Pounds.*

By STUART MCGUIRE, M. D., of Richmond, Va.,

ASSISTANT SURGEON ST. LUKE'S HOME FOR THE SICK.

The following case was a very instructive one to me, and I hope will prove interesting to the Academy; hence I will report it, and then make a few remarks on drainage after abdominal section:

K. W., of North Carolina, age fifty-two, mother of eleven children, consulted me the latter part of February for an ovarian tumor. She had noticed an enlargement of the abdomen fifteen years ago, but it had caused no inconvenience until her menopause, when it had commenced to grow rapidly. The tumor was now immense, interfering with locomotion, and rendering the woman almost helpless. The patient had had repeated and acute attacks of peritonitis during the past year, and was weak and emaciated. I prescribed a tonic, and endeavored to overcome the consti-

*Read before Richmond Academy of Medicine and Surgery, April 11th, 1893.

pation from which she suffered, but at the end of a week, seeing no improvement in her general condition, and fearing another attack of peritonitis, I advised an immediate operation, and placed her at St. Luke's Home, where she received the preparatory treatment usual in such cases.

I operated on her March 5th, assisted by Dr. C. V. Carrington, of this city, and the resident physicians of the hospital, Drs. McCormick and Tabb. A five-inch median incision exposed the tumor, which was found largely adherent to the parietal peritoneum. The attachments were separated by a steel sound, and the cysts, ten or twelve in number, rapidly emptied by a trocar. The sac was partially drawn out of the abdomen, two or three omental adhesions ligated, and the pedicle transfixed with a double thread, tied, cut, and dropped into the cavity. The peritoneum was then thoroughly flushed out with hot sterilized water, and the wound closed. No drainage tube was used, as the operation was perfectly aseptic, none of the contents of the cysts having entered the cavity, and there being no bleeding or apparent oozing from the previously adherent surfaces. Time of the operation, forty minutes. Weight of the tumor and its contents, seventy-seven pounds.

The woman suffered little or no shock from the operation; but shortly after being put to bed, the temperature began to rise, and in five or six hours reached 101.4° F. Saline purgatives were given, but were rejected by the stomach, and broken doses of calomel substituted. Enemata of salts, glycerine, and water were thrown high up in the colon by means of Langdon's tube, but all efforts to produce purgation failed, and the patient grew rapidly worse. Thirty hours after the operation the temperature was 103.4° ; pulse 140; the belly distended, and the patient almost in a state of collapse. The case was so desperate that I determined to open the abdomen and search for the cause of trouble.

The woman was given chloroform, lifted to a table placed at the side of the bed, four of the lower stitches cut, and the wound re-opened. As soon as this was done, about a quart of bloody serum escaped. The cavity was flushed out by means of Price's irrigator until the water returned perfectly clear, a glass drainage tube inserted, the wound closed, and the patient put back to bed. Improvement was immediate and decided; the pulse became stronger and less frequent, and the temperature fell two degrees in the next hour. No fluid could be drawn through the drainage tube, and it was removed at the expiration of twelve hours.

The patient made an uninterrupted recovery, and left the hospital four weeks from the date of the operation.

The mistake made in the case was not using the drainage tube in the first instance. Had I done so, I am confident the woman would never have had a bad symptom.

This case has led me to study the subject of drainage after abdominal section much more fully than I had done before, and I propose to-night to give briefly the result of my investigations, although I have nothing original to present.

The question of when and how to drain is still unsettled; some surgeons claiming that drainage should be employed in all cases; others stigmatizing it as a confession of imperfect operative work, or faulty technique; while a third and more conservative class hold that while it is essential in some instances, it should only be employed in carefully selected cases, as it is attended with certain unavoidable dangers.

The object of drainage is to remove fluid and debris from the abdominal cavity, thus relieving it of a soil in which germs would likely propagate, and cause decomposition and septic poisoning. This can be accomplished in several ways—indirectly by the action of saline purgative, and directly by the employment of tubes, wicks, or strips of gauze.

Drainage by saline purgatives was first advocated by Tait, of Birmingham. This class of drugs acts by causing a rapid and profuse exosmosis of serum from the intestinal vessels, and absorption of fluid and septic material from the abdominal cavity. They should be given in a concentrated form, and in large and repeated doses, and their administration begun as soon as there is evidence of septic fever; for if the temperature is allowed to reach 101° before efforts at purgation are made, the intestines seem to become paralyzed and refuse to respond to their action. Occasionally this difficulty can be overcome by the use of enemata.

This method of drainage possesses none of the dangers and disadvantages of the glass tube or gauze drain. When properly employed, it is very efficacious, and can be safely relied upon in a large proportion of cases.

Drainage by means of the glass tube was first introduced by Koeberle, of Strasburg; and when direct drainage is indicated, it is unquestionably the simplest way of effecting the object. The tube not only enables fluid to be removed from the abdominal cavity as fast as it accumulates, but also acts as a sentinel to give warning of hæmorrhage, should it occur, and materially shortens the time of operations, as it does away with the necessity for careful sponging or minute attention to bleeding points.

The disadvantages of its employment are, that it retards the union of the wound and predisposes to hernia; it favors septic infection by the admission of air; it may cause sloughing of a portion of gut or loosening of a ligature; it may become fastened by adhesions, or have omentum insinuated into its perforations and be difficult to remove; and, finally, it does not drain the entire abdominal cavity longer than forty-eight hours, as it becomes plugged with lymph and surrounded by adherent intestines.

Many of these difficulties can be obviated by care and good management, and the advantages of drainage by this method, in certain conditions, far outweigh its disadvantages. It should be employed in operations where peritonitis with effusion exists; where colloid or semi-solid matter has escaped, and its complete removal is a matter of uncertainty; where the peritoneum is sodden, infiltrated, or thickened from inflammatory changes, and incapable of the rapid absorption of fluid; where the coats of the intestines or bladder have been injured and fistula is feared; where the cavity has been contaminated by pus, fæces, or other septic matter; and where extensive adhesions render subsequent hæmorrhage or the secretion of large quantities of serum probable.

Several styles of glass drainage tubes are employed—Price's modification of Koeberle's original model being perhaps the best. It consists of a straight cylinder from four to six inches long and one third to one-half inch in diameter. It is open at both ends, and has its lower third

perforated with small openings, and its upper end surrounded by a small rim or collar.

To introduce the tube, pass two fingers through the abdominal wound into Douglas's cul-de-sac, and slip the perforated end along them as a guide until it reaches the bottom of the space. The collar of the tube should then be at the inferior angle of the incision, and nearly on a level with the skin. The stitches are then tied, except the one which brings the surfaces occupied by the tube in apposition, which is loosely knotted and left until after the removal of the tube, when it is tightened. Care should be taken that no loops of intestines are beneath the tube, and that the tube is not long enough to injure the bottom of the pouch, or too short to enable the complete removal of fluid which gravitates into it.

A piece of rubber-dam, twelve inches square, is punctured in the centre, and stretched over the end of the tube, the projecting rim preventing it from slipping off. A piece of aseptic cotton is placed over the mouth of the tube, and the four corners of the rubber dam brought together and pinned. The usual dressings are then applied to the wound—the tube being allowed to project through them so that it can be gotten at without disturbing them.

In a strict sense of the word, the tube is not a drain, as it cannot empty itself, and the fluid has to be removed mechanically. This can be accomplished by the capillary action of a strip of cotton or gauze placed in its lumen, or by occasionally emptying it with a syringe, to whose nozzle is attached a small piece of rubber tubing. If the latter method is employed, the most scrupulous cleanliness should be observed to prevent septic contamination, and the tube should occasionally be slightly elevated and rotated to prevent the insinuation of omentum into its perforations. The tube should be aspirated every fifteen minutes for the first hour, and then every hour or hour and a half until its removal. This is determined by the character and quantity of the fluid removed, and it should rarely be left in longer than 48 hours, as it is then largely shut off from the peri-

toneal cavity, and ceases to perform its mission; it retards healing and predisposes to hernia, and it is an open avenue for the introduction of septic infection.

Drainage by the capillary action of gauze was introduced by Mikulicz. A piece of iodoform gauze is placed in the abdominal cavity, and one end allowed either to project through the median incision or carried through the vaginal vault behind the uterus. Morris has recently modified this by making the gauze in the form of a wick, and covering it with oil silk. The gauze protrudes a trifle from each end of the cylinder, and a few holes clipped through the protective allows fluid to reach it elsewhere.

Gauze in strips is admirably suited to the open treatment of abscesses, where they can be rendered superficial; to the treatment of deep abscesses, where it is essential to shut them off from the general peritoneal cavity until adhesions are formed; and to the treatment of hæmorrhage or oozing, which cannot be stopped by ligation, but which can be controlled by packing it into the pelvis.

In all these conditions, gauze acts to a certain extent as a capillary drain, but its true function is rather that of a compress or packing. Its sphere of usefulness as a drain is very limited. It only drains the surfaces with which it is in contact; it has to become saturated before it removes fluid, and hence is itself a source of danger; it will drain water and serum, but will not carry off pus or blood; and it soon becomes clogged with lymph, which coagulates in its meshes, and becomes adherent to adjacent surfaces.

Adhesions are obviated by Morris' wicks, which are covered with oil silk, but the other objections just mentioned apply to them with equal force.

Conclusions.—In simple cases, use drainage by purgation. When complications indicate direct drainage, use the glass tube. When combined hæmostasis and drainage are required, or adhesions desired, use the gauze. In some cases a combination of the different methods is advisable.

ART. VII —Syphilis—Its Age and Relation to the Antiquity of Man.*

By EDWIN L MORGAN, M. D., of Washington, D. C.

I will not aim to discuss this subject as a bacteriologist, nor to enter into minute pathological details, nor consider the diagnosis, prognosis, or treatment, but will refer to the historical and scientific points of interest.

I believe syphilis is as old as the human race, and that it has followed man ever since in his migrations. In short, syphilis could not have existed without man. This curse has placed its seal upon our species, respecting neither the high nor the low, for no race has been spared; every clime has had her quota of victims, and even "the unerring hand of time," so far, has been unable to stay its onward march. And as long as man may dwell upon our globe, he shall pay the penalties of his crime.

Is America the original home of syphilis, and is man of as great antiquity in the New World as in Europe, Asia, and Africa? To both these questions, I answer, No. The age of man upon our hemisphere is of quite recent origin. The *prehistoric* man of Europe is claimed by some to be 240,000 years of age, or more. Dr. Jos. Jones, of New Orleans, in speaking of the "stone coffins" of Tennessee, says† he has "been impressed with the idea that in some former age this ancient race must have come in contact with Europeans, and derived this mode of burial from them. This view is sustained not only by the presence of copper crosses, and vases with crosses, and scalloped circles painted around them, and of *bones evidently diseased by syphilis*, in the stone graves, but also by certain traditions formally preserved by surrounding tribes." Then, under the heading of "Modes of Burial," in speaking of the ravages of syphilis, he states‡ in one of these skeletons the bones of the cranium, "the long bones of the arm (humerus, ulna and radius), and the

* Read before the Medical and Surgical Society of the District of Columbia at a meeting January 9, 1893.

† "Smithsonian Contributions to Knowledge." Vol. XXII. "Exploration of the Aboriginal Remains of Tennessee, p. 49 (1876.)

‡ "Mounds, Fortifications, and Earthworks." P. 35, p. 65.

long bones of the thigh and legs (the femur, tibia and fibula), bore deep erosions, nodes, and marks of severe inflammatory action. Many of the long bones were greatly thickened, presenting a nodulated, eroded, and enlarged appearance. When sections were made, they presented a spongy appearance, with almost complete obliteration of the medullary cavities. The specific gravity of the bones was diminished, and the microscopical characters were, in all respects, similar to those of undoubted cases of constitutional syphilis." "Every competent medical observer to whom these bones have been submitted has concurred in the view that syphilis is the only disease which could have produced such profound and universal structural alterations."

In the same mound, and near the grave that contained the "vase painted with cross, scalloped circles," etc., was found, in a "stone grave," a skeleton, the long bones of which were strongly "*marked by syphilitic nodes.*" "This cranium had several indentations and nodes on the bones as if they had been acted on during life by the syphilitic virus. The external table of the frontal bone appears to have been especially affected." The Doctor speaks as follows: "I have shown, by careful observations, that bones taken from stone coffins and burial mounds at Nashville, Franklin, Old Town in Tennessee, and at Hickman, Ky., *bear unmistakable ravages of syphilis.*" "That these diseases of the bones were not due to mechanical injury, or to exposure to cold, is evident from the fact that they were universally symmetrical in their manifestations; thus, when one tibia was diseased, the other was similarly affected, both as to the position and nature of the disease."

Dr. Benjamin Rush, in an article entitled "An Inquiry into the Natural History of Medicine Among the Indians of North America," etc., says, he did not notice in the case of Indians that they ever suffered from the effects of cold in their limbs, which were generally protected from cold and injury; also they have great powers of physical endurance, so far as hunger, fatigue and cold are concerned.

My own personal experience of seven years in northeast part of the State of Washington convinces me what Dr. Rush says is true. I am not aware, even in our day, that diseases of the bones are common amongst Indians, for my experience is to the contrary. Scrofula is prevalent amongst

some tribes, especially since the advent of the whites amongst them. I do not remember ever seeing a single case of diseased bones as the result of cold and injury amongst Indians while on the frontier in the locality mentioned.

Prof. Jones claims* that the bones taken from the "stone graves" of Tennessee are "*probably the most ancient syphilitic bones in the world.*" With regard to this claim, I cannot agree. The "stone grave races of Tennessee and Kentucky" were more advanced in certain arts than the nomadic and hunting tribes in North America. They built forts, fortified towns, "made superior stone implements, the art of sculpture was practiced by them, and they not only ornamented their fine samples of vases with the head of man and animals, but carved images out of blocks of stone;" "made them also from a mixture of clay and shells." "The features of their idols" resembled those of the Chinese images, "also the head dress and ornaments." These idols did not resemble those of the nomadic tribes, "but bore a striking resemblance to those of Mexico." The crania of the "stone grave race" and "mound builders" had those peculiarities which were common to the American race, distinguishing them from all others. They are supposed to belong "to the Toltecan division of the American nations," among whom are numbered the Toltecs of Mexico and the Incas of Peru. Their skulls resemble the crania of the Incas which are "remarkable for their irregularity of form," which is particularly striking.

These early people were quite numerous, judging from their works, graves, mounds, etc.—in Tennessee, Kentucky, and some other States. What became of this race? Only the silent page of history tells the tale, when we examine their works and remains.† They may have emigrated to other countries, as was the case of a horde of Calmuchs, in 1616, who, without cause, came from the borders of China, traveled across Asia, settling on the Volga river in Russia. In the depths of winter, January 5th, 1771, A. D., under

* "Smithsonian Contribution to Knowledge," Vol. XII, p. 71.

† "The Natural History of Man." Ade Quatrefages, p. 54.

great difficulties, 250,000 of them started for and settled in China, from whence they originally emigrated. We know diseases have decimated tribes in recent times, for in the biography of Audubon is stated, in 1837, out of 150,000 Mandan Indians, only twenty-five survived an epidemic of small-pox. Catlin states, out of 12,000,000 American Indians, 6,000,000 died from the same disease. What disease, if any, destroyed these people is unknown; but it seems more probable that they emigrated to some other part of the world. No doubt they were the ancient people of Mexico, who may or may not have followed the example of the Calmuchs, for some authorities claim they came from the South. The Toltecs claimed they were immigrants from a country called "Heuhuetapallan;" that they also came from the Northwest, where drouth, and especially pestilence, destroyed many of their people. Being filled with terror, they emigrated to another country.

Having examined the testimony, so far as Prof. Jones, M. D., presents it, let us now consider it from Prof. Cyrus Thomas'* side of the question, in his article entitled "Burial Mounds of the Northern Section of the United States," in which he differs with Dr. Jones in regard to certain points, and says that the ancestors of the modern Cherokees were the mound-builders in Tennessee.

Dr. James Nevins Hyde's article, entitled, "A Contribution to the Study of Pre-Columbian Syphilis in America,"† is one of great interest and value, so far as the discovery of syphilitic bones on the North American Continent is concerned, and also in regard to their *supposed antiquity*, which claim, to my mind, is still unproved. I hardly think that the majority of our American anthropologists and other scientific men have finally made up their minds on this important point, and yet perhaps I am mistaken. Dr. Hyde says, "that they antedate, by a long period of time, the relics of the mound-builders and cave-dwellers." "The mode of their sepulture was different from that prevalent amongst

* "Annual Report of the Bureau of Ethnology," 1883-84, p. 9.

† "American Journal of Medical Sciences," August, 1891, p. 117.

ances indicated by these names, as also from that which has survived to our own day among the Zanis." He speaks of these diseased tibia and their appearances, and submitted them to Dr. T. M. Prudden, of the College of Physicians and Surgeons of New York, for microscopical examination, and also to get his opinion. Dr. Prudden says, under the heading,* "Remarks on Morphological Characters and Causation," "Whether the alterations are due to a specific cause, that is, to syphilitic infection, or to some other agency, it is, I think, not possible to say, with even a measurable degree of positiveness." Dr. Hyde calls attention to the fact that syphilitic bones have been found in Colorado, California, and other parts of our country, in the graves of the aborigines. Dr. Prudden does not consider† the adult, whose bones he examined, had "any phase of hereditary syphilis," etc. He further states, "There is no evidence whatsoever, so far as I can see, of the presence, at any time, of the more common and typical circumscribed, nodular, or gummatous lesions, which are alone characteristic of syphilis of the bones." For further details I refer you to Dr. Hyde's paper containing Dr. Prudden's report on these bones.

Dr. Albert S. Ashmead, in his article "Pre-Colombian Syphilis,"‡ refers to Dr. Hyde's able paper, and says: * * * "many—Dr. Shradley among them—think we have been too ready to accept the compliment paid by the ancient Continent to the New in crediting it with the origin of the disease" (syphilis). He then quoted from "Prof. Brinton, the American Paleontologist," who says, "The origin of syphilis is still an open question. It seems to me probable that it existed time out of mind in both the New and Old World, but assumed a peculiar malignant form in Europe at the close of the fifteenth century. Certainly in America, syphilis of the bony system existed before the discovery, as is shown by relics in ancient graves." Dr. Hyde, in his pa-

* Loc. cit., p. 127.

† Loc. cit., p. 128.

‡ "Medical News" (October 31, 1891), Vol. LIX, No. 18, p. 511.

per,* in speaking of the bones found in "The Madisonville Pre-Historic Cemetery," says there were "two tibia suggesting gummatous changes in the bones of the syphilitic," etc.

Now, it is far from being a fact that these remains and relics were of ancient origin, as there is a difference of opinion in regard to their antiquity; and Prof. Otis Mason, of the Smithsonian Institute, in speaking to me of these mounds and their antiquity, especially those at "Madisonville," said he did not regard them as ancient, for he had gone over the ground and examined them carefully. He regards these remains and works as belonging to Indians, and can show arrow-heads, etc., identical with those already found.

From the writings of an old Spanish monk, M. Jourdanet translated,† the fact appears that *syphilis existed in Mexico before the advent of Europeans*. Dr. Hyde calls attention‡ to the mode of burying those who died of syphilis amongst the natives of "New Spain," upon the American Continent. He refers to the historical writers on the subject—also including two papers of Dr. Gustavus Brunhl, of Cincinnati.

In examining a few of the authorities,|| we find Toltecs, Aztecs, Mayas, and Colhuas, classified under different headings, and, in fact, to one not an anthropologist, it is decidedly confusing as how to locate these people and their history. The Aztecs and Toltecs are the same race, then the Toltecs and Mayas, then again Mayas and Colhuas, and also they speak of Yucatecs and Aztecs, etc. The legend§ of the Toltecs speaks of Hue Hue Hapalan, who came amongst them, and is described as a ¶*white man with flowing beard*, and was considered the leader and civilizer of the Nauhan family, to which belong the **Aztecs, who are called

* "Amer. Jour. Med. Sci.," August, 1891, p. 123.

† Buret. "Syphilis in Ancient and Pre Historic Times," Vol. I, Eng. Edition, pp. 41 and 42.

‡ "Pre-Columbian Syphilis," etc., Amer. Jour. Med. Sci., p. 118.

§ Peschell Races of Man, Prichard "Natural History of Man," Pre-Historic Races of United States, and others

|| "Atlaulis," Donnelly, p. 165.

¶ "North American of Antiquity," p. 268.

** "Races of Man," pp. 435 to 437.

Naahautl, Aztecs; and also the term "Nahautlecs" is frequently used to designate these tribes. The inhabitants* of Central America, according to Prichard, who came from the Northwest, were the Aztecs, or "Aztecas, Toltecas, Chicanas, and the Nahaultacas." One authority classifies† all the inhabitants of Mexico, Bogota, and Peru, as the Toltecan family. I read an article in a religious journal, called the "*Catholic Mirror*," some years ago, on Mexico, etc., in which the author of the article states it is difficult to distinguish and decide which are the ancient and which are the modern writings in examining the ruins, etc. To some extent, Prof. Wilson says,‡ this is a fact. It is readily seen the difficulty the historian and others labor under when examining into the past history of Mexico and Central America.

An Indian skull|| was found at Pernambuco, in South America, which "presented typical lesions of hereditary syphilis." M. Moreno§ presented two skulls to the "Society of Anthropology," found in "the old burial grounds of the Rio Negro." They represent "races anterior to the Spanish Conquest, and extinct before it." The second, "which presents pathological characteristics, was at a depth of about four metres," etc. "Not far from there, in the same stratum, were a few fragments of the carapace of a glyptodon." Both craniæ were found in an "argillaceous layer similar to the quaternary loam of the pampas." "The other skull is more modern, although quite ancient," and was found at a depth of two metres in solidified dunes.¶ The glyptodon lived in the post-Pliocene period, and is now extinct; also probably the ancestors of the present Armadillos in South America.

Having shown the probability of syphilis, as a disease, occurring amongst the ancient Mexicans, as mentioned in their early literature, and also of its occurrence in Brazil, I

* Prichard "Natural History of Man," p. 370, 3rd Edition.

† Encyclopædia Britanica, Vol. I, p. 42. (Stoddard Edition.)

‡ Thomas Wilson, Smithsonian Institute.

|| "Syphilis in Ancient and Prehistoric Times," p. 39.

§ "Syphilis," Buret, p. 42.

¶ "Ancient Life History of the Earth," H. Alleyne Nicholson, p. 351.

shall now consider the evidences furnished by the bones of the Incas, or Yucas, of Peru. Humboldt thinks Manco-Capac—the founder of the later dynasty of the Incas—made his appearance about the middle of the twelfth century, or two hundred years before the founding of the city of Mexico, while Pizarro arrived in Peru, about 1532, A. D. Of five Peruvian skulls, belonging to children which were sent to France, and four of which “are all pathological, and show the *undeniable traces of hereditary syphilis*,” Parrot and Broca agree in regard to the syphilitic lesions in the skulls of the children already referred to. Buret,* in speaking of these skulls, as described by Parrot, says: “The important fact to remember is that, as a result of syphilis in the parents, the children present, especially at the superciliary ridges, thick and *persisting osteophytes*.” Buret, in referring to the two Peruvian skulls donated by M. Ducroy,† says: “The *characteristic lesions being very marked*,” etc., in one case. Syphilitic skulls have been found at Ancona. ‡Parrot says syphilis existed in Peru before the Conquest, and there are skulls in Europe from that locality that prove this assertion. Broca thinks|| there is documentary evidence to prove the possibility of the existence of syphilis in Europe before the discovery of America. Buret, on page 41, sums up the evidence in his book in favor of hereditary syphilis, after calling attention to some of the leading points in regard to the skulls examined belonging to children, says: “1st. *Hereditary Syphilis* deforms the skull in a typical manner.” 2nd. “Syphilis existed in Peru before the Spanish Conquest.”

In the preface on skulls in Reiss and §Stübel’s celebrated work, Virchow says: “From these deviations belonging to early childhood, partly foetal life, must be distinguished the

* “Syphilis in Ancient and Prehistoric Times,” p. 39.

† P. 41.

‡ P. 43.

|| P. 43.

§ “Peruvian Antiquities,” “The Necropolis of Ancon in Peru.” W. Reiss and A. Stübel. Part XIV. Skulls. Rudolph Virchow, M. D., LL. D.

also very frequent pathological changes peculiar to advanced age. Conspicuous amongst these are the thickening and density of the bones ranging from quite simple states of slightest hypertrophy to complete sclerosis and appearances of arthritis deformans." Again, Virchow remarks, under headings of "Plates 108-110," "Slightly Deformed Skulls," Skull 1554: "Hence may be taken as a fairly typical specimen." "Round the great occipital foramen traces are seen of *arthritis deformans*. Perhaps connected therewith is a general *hyperostosis* of the calvarium." This crania, he says, probably belonged to an elderly man. "Apart from the thickness of all the bones," etc., * * * * * "the form of the skull was orthobrachycephalic." "At the posterior part of both parietals is visible a longish depression, apparently the result of a traumatic influence." "On the right supra-orbital arch a depression like a cicatrix," etc. "On a skull just in front of the fontanelle region a flat exostosis occurs."

I have given a summary of a few points in regard to several of these skulls as given by Virchow, but time and space do not permit any lengthy description of the craniæ, so far as my paper is concerned. The principal points described by Virchow are *appearances of arthritis deformans, sclerosis of the occipital foramen, thickening and density of bones increased, exostosis and general hyperostosis of the calvarium*. Having examined the literature of the subject relating to diseased or syphilitic bones found upon the North American and South American Continents at various places, let me ask the so much disputed question in times past asked, Could syphilis have been introduced by Europeans, or was the disease indigenous to the Indian race of North America? Could shipwrecked Asiatics, explorers from the Eastern countries, or migrating tribes from Siberia and other places, introduce this disease amongst the natives? It has been claimed the crews of Columbus' vessels and other adventurers introduced syphilis into Europe. It seems probable* the natives of Yucatan visited the Island of Cuba, and some

* "The Races of Man." Peschell. Pp. 206 and 207 (also foot notes).

explorers say these people used sails on their boats. Columbus met several boats from Yucatan off the coast of Honduras, but he makes no mention of sailing vessels. *There can be no doubt there was more or less intercourse between these islands off the coast of the Continent and the main land. Hunter† was in the West Indies from 1796 to 1816 as a captive, and he states the Indians say they never had syphilis, nor knew of its existence until they came in contact with the whites. "All the earlier voyagers and explorers unite in describing the natives of America as remarkable for the perfection of their persons and limbs, their absolute freedom from all deformities, ulcers, and blemishes."

Bryan Edwards, in his "History of the West Indies," is "compelled to admit," "it might have broken out with renewed violence about the time of Columbus' return from his first expedition," and also the "Americans" "were excessively sensual; and I believe the Spaniards of 1492 are as truthful as our own citizens who contract venereal diseases from water-closets, etc. As an evidence of this, they lay the blame upon the Indians, who return the compliment, and accuse the white race with spreading this curse. We see, during the year 1494, when Charles VIII of France invaded Naples, syphilis became quite prevalent in Europe. The Italians called it the "French disease," and the French said it was the "Italian disease;" and finally the Spaniards were accused of having given it to others in Italy. This disease may, or may not, have been introduced into Spain by the crew of Columbus. Yet, the fact remains that this disease existed in Europe for centuries before the discovery of America by Columbus.

In France, syphilis existed in "Prehistoric Times."‡ A skeleton of a female was discovered by Abbé Ducrost, and the tibiæ were the seat of *exostosis*—manifestly *syphilitic*. "Broca, Ollier, Parrot, and Virchow," pronounced these *bones as syphilitic*. The best authorities on anthropology,

* "The Races of Man." Peschell. Pp. 205 and 206.

† "Memories of Captivity Among the Indians of North America from Childhood to Old Age." John D. Hunter. P. 142. (London, 1823.)

‡ "Syphilis in Ancient and Prehistoric Times." Buret. P. 38.

"Broca, Parrot, and others, say these bones belong to the stone age during the reindeer period. A number of other syphilitic relics were found in dolmens, etc., of different periods. Time and space do not permit me to dwell on these prehistoric discoveries, nor enter into minute details.

We have literary evidence of syphilis occurring amongst the ancient *Greeks, Romans, Hebrews, Assyrians, Babylonians, Hindoos, and Egyptians. The Egyptians recognized the disease fourteen hundred years before Christ. In our day, thousands of mummies have been burned as fuel in locomotives, and also ship-loads carried to England to be ground as fertilizer. If the bones of these mummies had been carefully examined by competent persons, no doubt syphilitic lesions could have been found; and discoveries of the future of tombs of great antiquity, I hope may be made a subject of special investigation by our leading pathologists, to settle this point, as has been the case in Peru and other countries.

It is said the Chinese had this scourge amongst them five thousand years ago, and it existed in Japan eight hundred A. D. The Japanese came to Japan about six hundred and sixty B. C., according to Dr. Michéa. Atkinson,† in his work, "Narrative of Seven Years' Explorations in Siberia, Mongolia, Chinese Tartary," found barrows in Chinese Tartary one hundred and fifty feet high, steep, "regular in form." Over the steppe are scattered numerous tumuli, "built by different races, the greater ones being the most ancient." "One stone mausoleum, dome-like in form, is three hundred and sixty-four feet in diameter, and thirty-three feet high." "This mausoleum must bear some resemblance to the large mounds in Tennessee."

Tertiary Man in Europe is not an established fact, and certainly not in America, nor upon our Continent, neither is *Quaternary Man*. According to ancient history, man is of great antiquity, but science shows he is of a greater age than is generally supposed—in fact, he may be five hundred thousand years old.

* "Smithsonian Contribution to Knowledge," Vol. XXII, p. 118, 119.

† "Syphilis in Ancient and Prehistoric Times."

Mr. Hunt, former President of the British Anthropological Society, considers our race nine million years old.

Professor Haynes, of Boston, discovered chipped flints in Egypt, near Thebes, and Gen. Pitt Rivers made similar discoveries lower down towards the mouth of the Nile.

Borings were made in the alluvial soil of the valley of this river, and at a depth of seventy-two feet evidences of a high civilization were found in each case, according to the depth of these explorations.

In regard to the original home of syphilis, it has been claimed Africa was the point from which this disease was spread over our globe. Probably from that standpoint, Donnelly might claim it first appeared in Egypt, and, as he claims, the Egyptians were colonies from the sunken continent of Atlantis, that this submerged land was the true home of this curse upon mankind, and was also carried into Mexico and Central America, as well as South America, from this place. We know that the Colhuas, and other people, had traditions of a flood, etc., and say they came from the East, as Donnelly claims, Atlantis.

In speaking of syphilis in *Peru, Mr. Broca, says: "I feel very much inclined to accept it, without admitting on that account, that syphilis of Europe is of American origin; for that disease may, like many others, have taken its origin at several points on our globe. The existence of syphilis in Europe before the discovery of America is, if not absolutely demonstrated, at least rendered very probable by a large number of documents." "We have seen that syphilis did exist in prehistoric times in France, and that Abbé Ducrost found a female skeleton, the bones of which were syphilitic, and, according to the best anthropologists, Broca and Parrot, "could be referred to the stone age."

History shows America was visited by Europeans and Asiatics, and also probably others, before the discovery of Columbus. This being admitted, the points that suggest themselves are: Did this disease first make its appearance on the arrival of these Eastern and European adven-

* "Syphilis in Ancient and Prehistoric Times." Buret. Vol. I, p. 43.

turers upon the American Continent? or was it introduced into Europe and Asia at or before the tenth century A. D.? I think it possible these first explorers may have introduced this affection into America; and yet it may, as has been stated, have broken out at different and remote parts of our globe about the same period. If it was so common in America, why did not the early explorers and others notice the ravages of this disease, as was the case in the invasion of the kingdom of Naples by the French?

Also, if syphilis was of such great antiquity in the New World, as is claimed, as a matter of fact we should find, in every case, undoubted evidences of this disease. But so far as our investigations have gone, only a few skeletons, some of which are of quite recent date, have been discovered in graves, mounds, etc., in the New World. The great antiquity of man in America has not been proved, when compared with prehistoric and historic man of Europe, Asia, and Africa.

During the reign of the Cæsars, according to historians, about nineteen hundred years ago, venereal disease was not considered a mark of honor, and no doubt the ancient and "noble Roman" was ashamed to acknowledge as to how he contracted this curse. In my opinion, the Roman, Spaniard, Indian, and the American of eighteen hundred and ninety-three, will all lie, or else give some excuse as to how they contracted this scourge of our race. *I am not a believer in the American origin of syphilis*, as there are too many elements of doubt in regard to this claim. It is claimed the disease was unknown, and also not understood, in fourteen hundred and ninety-two, and some go so far as to say the natives of Mexico better understood the treatment of this affection than the Spaniards. It may have existed in Europe for ages in a mild form, or else in a severer form in isolated localities. The facilities for spreading the disease may not have been as favorable in the twelfth, thirteenth, and fourteenth centuries as in the fifteenth, as, in the earlier ages, comparatively few people traveled from country to country.

Equally as good evidence can be brought forward, no doubt, to show syphilis existed in ancient times in Rome, Greece, Egypt, Assyria, India and China, as is offered in regard to its originating in America.

What might have been considered facts in 1492 and 1592 in regard to the American origin of this disease, certainly can have no weight in the face of recent discoveries, made by anthropologists and archæologists. The science of geology was practically unknown, as it is in its infancy even in our own times; as to what the future will prove for this specialty and palæontology, in solving the difficult problems in regard to the antiquity of man, remains yet to be seen. I believe syphilis is as old as our race. As to its origin or whence it came, the *silent* page of history can only tell.

2141 *Pennsylvania Avenue.*

ART. VIII.—Abdominal Corset and Salol in Chronic Fermentative Diarrhœa, Due to Torpidity and Relaxation of the Bowels.

By BEN. H. BRODNAX, M. D., of Brodnax, La.

Perhaps the following may be new to some, as I have, in my time, met several "graduates" who had never heard of the mode of treatment, but, on my recommendation, tried it and found it a perfect success.

Doctors will often run on a case of a child, from one to three or four years old, sallow or pale, a constant desire (three or four times a day) to have an action from the bowels. The action does not smell as it should, is thin, and perhaps greenish. The child is impassive or fretful, seems to be sluggish and peevish. On examining the abdomen, it will be found more or less protruded or swollen—"paunch belled"—which condition has often lasted for months.

Such cases are very rebellious to treatment with or by medicine. But by a very simple arrangement, a sometimes magical effect is produced in a very few hours. This is my

plan, and from experience I can cordially recommend it: Make a broad band of, say, cotton flannel, double or lined with flannel, large enough to go nearly around the abdomen and wide enough to reach from the pubes to the breast bone; have the band so short that it will not meet by three inches in the back. Now sew on some tapes about an inch apart on each end and opposite one another, and you have what might be termed a many-tailed bandage. Put this on the child pretty tight, and every night and morning tighten it a little. Give some, say, three or four half-grain doses of calomel, and then give turpentine tea in teaspoon doses every hour or two, with half to one grain of salol.

My idea is that the intestines are distended by fermentative gases, and cannot force out their contents or absorb the nutrient juices of food necessary to sustain life. By compressing the abdomen, the intestines regain their normal contractility, and, by emptying themselves, cure is set up; and the peevish, fretful infant, relieved of the constant neuralgia of the bowels, becomes happy and healthy.

I have used this appliance, which I call an "abdominal corset," for over twenty-five years. My grandmother had used it on her plantation sixty years before she told me of the plan. So it is really very old practice (minus the salol), but not the less sure for that. After you have failed with the new modes of treatment, try this and be comforted.

ART. IX.—Acute Purulent Inflammation of Middle Ear.*

By B. F. TRAVIS, M. D., of Chattanooga, Tenn.,

EYE, EAR, NOSE, AND THROAT SPECIALIST.

I select this subject because it interests each one present. It is no longer regarded as a disease of little consequence, especially after it has reached the suppurative stage—better known by the laity as "running at the head." Acute purulent inflammation of the middle ear is of much importance, because it may result in mastoiditis, cerebral meningitis,

* Read before Chattanooga Medical Society.

and chronic purulent inflammation—either of which may result in loss of hearing or in death.

Acute inflammation is generally caused by an extension of a pharyngeal or naso-pharyngeal inflammation along the Eustachian tube to the tympanum.

Buek says that “in scarlet fever and small-pox, it is quite possible for the inflammation, peculiar to these diseases, to develop primarily in the middle ear as well as by extension from the naso-pharyngeal space.” However this may be, the fact remains that the nasal or naso-pharyngeal symptoms usually precede the aural. Scarlet fever, no doubt, stands at the head of the list of general diseases, which are apt to be followed or complicated by a purulent inflammation of one or both middle ears. Measles should, perhaps, be placed next on the list; then follow small-pox, typhoid fever, and cerebro-spinal meningitis; we may also add syphilis and tuberculosis.

The different methods of flooding the nasal passages with remedial solutions, or with simple water, are all liable to produce an acute inflammation of the middle ear. The nasal douche is the most objectionable way of using these solutions. Plugging the nares has been reported as a cause. The disease may appear primarily as the result of cold upon the meatus and drum membrane, as from wind, cold injections, cold sea and river bathing.

In the adult, the *diagnosis* is unmistakable. In very young children, it is sometimes difficult, but it is generally possible, however young the subject, to determine whether or not an inflammation of the tympanum exists. The accession of the disease is marked by sharp, lancinating pain referred, by the patient, to the depth of the ear usually, but in some cases shooting over the temporal and parietal bones. It should never be mistaken for neuralgia.

These pains are usually remittent, but rarely completely intermittent, and are apt to be worse at night. Children old enough to speak awake suddenly at night and cry out, “My ear.” The pain is usually sudden in origin; and, if unrelieved, goes on increasing in intensity until suppura-

tion and rupture of the membrana tympani occurs. There is a marked sense of fulness which is very trying and often lasts long after the pain ceases. Tinnitus aurium is a common symptom in all affections of the tympanum, and especially is it the case in acute inflammation. Impairment of hearing is not always a marked symptom in the early stages; but as the disease progresses, this symptom becomes more prominent. By inspecting the drum membrane with the use of an ear-speculum and a good artificial light properly reflected, you will notice a slight congestion along the manubrium, and sometimes a pinkish hue of the whole surface of the membrane; again it is only upon the periphery and along the handle of the malleus; while the other parts of the membrane are of a normal color.

Usually, after the first forty-eight hours, there is a bulging outward of the membrane. An examination is sometimes very difficult to make on account of the swelling of the tissues in the auditory canal.

As the disease progresses, there may be marked febrile reaction with a temperature of 101° to 103° F. In strong, healthy adults, it is often entirely wanting, while in children and debilitated persons it is usually found.

We may also mention that a pharyngitis and tonsillitis may exist either with or without a coryza. All these symptoms, however, may exist together, or they may exist separately.

A case of acute inflammation of the tympanum, promptly recognized and treated, usually terminates in full recovery. In less favorable cases, suppuration occurs, but this also, when properly treated, is a tractable disease. Roosa says the adult who is seized with acute inflammation of the tympanum should be placed under close observation, and be kept from harassing or fatiguing occupations, until all acute symptoms are fully subsided; for inflammation of the membranes of the brain is not a rare consequence of what is sometimes thought to be an insignificant affection. Some other writer has said, "Each inflammation of the lining membrane of the tympanum is essentially a periostitis."

Now, when we come to the *treatment*, we must be governed altogether by the stage of the disease in which we find it. If fortunate enough to see the case in the outset, we should endeavor to abort the inflammation.

I invariably use, in the first stage of the disease, the hot-water douche—as hot as the patient can bear. The fountain syringe is by far the best instrument for this purpose. It should be hung on the wall just above the patient's head, and the stream continued for an indefinite length of time, by continuing to re-fill the bag. As soon as the pain is relieved, discontinue the hot douche and apply hot applications, externally, to the ear, either moist or dry.

Another method I often resort to, and which is fully as effective, but a far simpler method, of poulticing the drum-membrane, is to pour water of a temperature of about 100°F. into the external auditory canal. For this purpose, an ordinary teaspoon or a glass dropper may be employed. The water, of course, must be poured into the ear while the patient is lying down, with the affected ear turned upward.

Local blood-letting, by means of leeches applied near the orifice of the external auditory canal, preferably the tragus, stands, perhaps, next in order as a means of alleviating the pain and checking the inflammation, although I have but little experience with leeches, and hence can say but little in their favor.

In connection with these local measures, give morphia, bromide of potassium, aconite, and belladonna.

Cocaine has been used locally by some, and with seemingly good results, but I must say that it had but little effect in my hands.

In the event all these measures fail to relieve the pain, or to arrest the inflammation, what is to be done? The proper course to pursue at this time is generally indicated in a very clear manner. The inflammation, in its further progress, has now caused the drum-membrane to swell greatly; through infiltration of its tissues, or to bulge outward through the pressure of exudation contained in the tympanic cavity. In either case, an incision through the drum

membrane is what is most needed. The longer the pressure is allowed to continue, the greater is the likelihood that the patient will experience some of the sequelæ which I have already referred to. By doing this operation as soon as this bulging outwards presents itself, you will save your patient much suffering.

• The incision should be made in the posterior half of the membrane, as here you will usually find the spot of most prominent bulging, if any such exists; and at this point you are less liable to injure the ossicles and tendons of the tympanum. I seldom ever use an anæsthetic, as a simple incision usually suffices. Buek recommends entering at a point high up and making a stroke downwards, and in this way you can usually make an opening large enough for all purposes. If, for any reason, you should wish to make a T-shaped operation, then it would become necessary to use an anæsthetic.

It is by no means an indifferent matter what kind of a cutting instrument is used in making an operation in the membrana tympani. There are a great many instruments in the market for this purpose, and some of them are good, while others are not so safe. Buek's myringotome is a good instrument, and one I like very much. It is spear-pointed with two-edged blade, with a cutting edge of three millimetres in length, and broad at its base. After making the incision I use the Politzer's bag, and then irrigate the drum membrane gently with hot water, or apply it by pouring the water into the external auditory canal, and apply hot cloths over this. As the water will get cold in a few minutes, it will be necessary to repeat often. When suppuration has been established, douche the ear out well three or four times daily with a fountain syringe. I sometimes use hot solution of boracic acid or bi-chloride of mercury. Never use powdered boracic acid in these cases, as it will only tend to form a mass and act as an obstruction to the free flow of the pus. If the case progresses favorably this course of treatment will be sufficient; and when it terminates favorably without any complications it usually does so

anywhere from one to two or even three weeks; but during this time you must see that the opening in the drum membrane is sufficient to give vent to the pus, and keep it thoroughly cleansed. If the perforation is not sufficiently large, make it larger by operative procedure. Green, of Boston, says never make an attempt to arrest or diminish the discharge so long as pain persists.

After two weeks have elapsed, and the inflammation is still more or less active, then measures should be adopted calculated to arrest the discharge. Now, in order to arrest the discharge, which is supplied chiefly by the mucous membrane lining the tympanic cavity, and to a less extent by that lining the mastoid antrum, we must bring our remedial agents in direct contact with the diseased tissue, and there are several ways by which this may be done. The opening now should be sufficiently large in order to properly cleanse the cavity, which can be done with a cotton holder armed with absorbent cotton. The middle ear pipette is a right valuable instrument with which to wash out the cavity. Blake's middle ear syringe has always given perfect satisfaction in my hands, and of course I am partial to it and use it almost exclusively for washing out the middle ear and making applications in the same cavity.

After we have cleansed the middle ear as thoroughly as we can, our next step is to introduce our remedial solution into the tympanic cavity. A simple way of accomplishing this is the following: The medicine should be dropped into the auditory canal until you have dropped eight or ten drops; then with one hand pull the auricle outward, and with the other hand press the tragus backwards; then relax your hold on the auricle; press the tragus firmly inward toward the drum membrane, at the same time the patient should be instructed to perform the act of swallowing. Now this method is not always satisfactory; and should it after trial fail to accomplish the desired purpose, use the pipette or middle ear syringe.

Of the different local remedies that may be used in the treatment of purulent discharge from the middle ear, I employ, as a rule, nitrate of silver in solutions of different

strength, usually from two to five grains to the ounce of distilled water. For patient: use sulph. zinc 2 or 3 grs. to the ʒj, or plumbi acetate 2 grs. I have used as much as 60 grs. nitrate silver to the ounce of water with happy results. Buek has on two or three occasions used a saturated solution of nitrate of silver (480 grs. to the ounce of water) without any unpleasant symptoms. If the opening is sufficiently large, powdered alum, aristol, or iodoform might be used with good results. This is to be accomplished by putting a small bead on the end of a delicate probe, and pass right into the tympanic cavity. These measures I have enumerated have proven very satisfactory in my hands, and hence I have very little experience with any of the new remedies I see recommended in some of our journals.

Now, in conclusion, I would say that in acute inflammation of the tympanum, all nasal or naso-pharyngeal inflammations should have prompt attention and proper treatment, such as the application of solution of nitrate of silver and iodized phenol and glycerin in different strengths. Enlarged tonsils, adenoid vegetations in the vault of the pharynx, and hypertrophies, and other obstructions in the nasal cavities, should be removed by operative procedures.

I shall not speak of mastoiditis, nor chronic purulent inflammation of middle ear—two not uncommon complications or sequelæ of acute inflammation of the middle ear.

ART. X.—*Imperfect Articulation, Stammering, Etc —Their Cause and Cure.**

By **FREDERICK SOHON, M. D.**, of Washington, D. C.

My reasons for selecting this subject are that many causes contributing to modify the character of the speech are overlooked by the physician, and neglected by the family, until a fixed habit of speaking improperly is developed; so that a short consideration of the various conditions that prevent a fluent articulation of speech-sounds may not be amiss.

When such imperfections exist to only a minor and tem-

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, March 13th, 1893.

porary degree, we may say they are unimportant ; but where an impediment of speech exists to any extent, the child is apt to become a source of laughter to his companions ; is piqued as not being as capable as his comrades ; and so receives many wounds to his tender, susceptible nature, besides the fact of the ugliness of an imperfect articulation to those with whom he comes in contact.

When air is expelled through the trachea, with the vocal bands approximated, it is changed into a vibrating column that produces sound. The "*intensity*" of this sound is changed as the expelling force is increased or diminished. The "*quality*" is determined by the relative position of the vocal bands and the resonant chambers above. The changes of "*pitch*" are, it is commonly stated, due to a stretching of the vocal bands. This explanation is usually respected and accepted because of its age, but it is wrong to compare the voice to the sounds produced by stringed instruments where the longer cord and stronger tension will elevate the pitch.

The larynx is properly comparable to a reed or organ-pipe where the *calibre* and *length* of the *tube* and shape of its outlet fix the pitch. The same pipe, with its outlet closed, will be of lower pitch than when open, and in pipes of the same calibre, but of different lengths, the pitch is different.

As the larynx cannot change its shape to such an extent as to admit of the wide range in the pitch of the human voice, any more than the vocal bands will permit of enough stretching to accomplish the same end, the pitch is determined by several factors. They are—1st, the length of the band *in use* ; 2nd, the tension ; 3rd, the shape of the resounding tube. The cords are not really *stretched*, but the same result is obtained by bringing only a part of the cord into play.

Speaking roughly, in the lower registers, the whole band is not in use, but merely the portion between the anterior insertion and the processus vocalis ; and from these tips backward the cord is lax and widely divergent. In the next, the whole band is in use and the tension moderate,

and in the highest normal register the tension is strongest, and the glottic cleft a mere slit.

The changes in pitch are further sub-graded by changes in the calibre and length of the vibrating column of air by constricting and elevating the laryngeal opening, and elevating and curving the epiglottis, and changing the shape and height of the pharynx. The shape of the laryngeal cavity has such an importance in determining the pitch that the laryngologist, experienced in such matters, can tell the register and approximate the musical limit of the voice by inspection. The fact that the position of the epiglottis has an important bearing on the formation of speech is lost sight of by teachers almost as universally as the persistence of the idea that it acts as a trap-door by being bent over backward, over the laryngeal orifice, during deglutition.

That it has an important bearing on the formation of speech-sounds is easily proven by studying the restricted range of pitch, when it is functionally useless, by being distorted or firmly fixed by disease, and also in cases where it has been destroyed.

The sounds generated in the larynx are formed into distinctive tones (vowels) by varying the length and breadth of the buccal cavity. By interrupting or diverting the vibrating column of air by the tongue, palate, teeth, or lips, we replace the pure vocal sounds by the consonant sounds. The syllables and words are then formed by combinations of these tones. The overtones, that give to the voice its musical character, are, at the same time, created by the vibrations in the nasal cavity.

Any alteration in structure or loss of function of any of these structures will lead to interference with, or at least modify the proper and free articulation. Among these, we may mention those congenital, as cleft palate, hare-lip, enlarged tongue; inflammation of any part of this large surface, by causing a muscular paresis or a thickening of the parts; obstruction of the lumen of the passages through compression from without, as goitre, enlarged glands, tumors, abscesses, etc.; obstruction from within, as enlarged

tonsils, post-nasal adenoids, or occlusion within the nasal cavities and polypus, or other tumors within the larynx. ulcers from local or constitutional causes, lack of sufficient enervation, or a paralysis due to anæmia or pressure from along the course of the nerve supply, some spinal diseases.

The most prevalent of the modifications occasioned by these, and many other causes, have received particular names, as the "*stomach voice*," the "*nasal voice*," etc. The deep and gruff stomach tone is occasioned by pressing the tongue and epiglottis backward into the œsopho-pharyngeal space so as to smother and reflect backward the coarse vibrations that are caused by the widely-diverging vocal bands. The nasal twang is caused by complete or partial occlusion, congenital or otherwise, in the post-nasal space or nasal cavities, obstructing the passage of air that is needed in the pronunciation of certain sounds, aided by the usually accompanying highly-arched palate.

The opposite condition is when a paralysis or structural loss of the soft palate or uvula permits too much air to enter these cavities.

The *voice of puberty* may be due to both functional and anatomical causes. In the hastened growth of this period, there is usually an accompanying catarrhal condition, and also muscular inco-ordination occasioned by the rapid changes in shape.

The *clergyman's* or *speaker's voice* is due to a hypertrophic follicular condition of larynx and pharynx and muscular paresis of the laryngeal muscles from overstraining.

In the *false alto voice*, only the anterior third of the cords vibrate, a muscular node being formed at this point, and also lengthening of the air column by elevation of the epiglottis and soft palate, and narrowing of the pharynx. The double voice, where in certain registers two distinct tones are produced—also known as the *cracked voice*—has been the cause of the failure of many of the best singers. It is due to the formation of a small nodule of fibrous tissue at the upper or free edge in the middle of the vocal band. This has been named the *singers node*, though it not unfre-

quently occurs in childhood. The largest that I ever saw was in a child of seven years. The treatment of these conditions, which is almost wholly surgical, is usually successful.

But there are other grave alterations of proper articulation that are likewise curable; and that they are not remedied is a shame and reproach to the profession. In these days, when painstaking science has succeeded in teaching even the dumb to speak, it is strange that children are allowed to grow up with annoying and repulsive habits of stammering and stuttering.

Stammering consists in eluding syllables or individual sounds, or blending them together, or substituting one for another. In stuttering there are a series of spasmodic forcible expiratory efforts before the word can be formed. These affections can exist in patients in whom the organs concerned in the production of speech are normal. Various explanations have been advanced to account for this.

To save time we may consider them together, as it will be easily understood to which condition they apply. Spasm of the diaphragm during expiration, shallow inspiration, want of power for expiration, emphysema, enlarged tongue, nervousness, etc., are among the attributed causes.

But, according to my experience of this affection, the cause is simply that the sufferer either does not appreciate the correct sounds and the difference between them and his own spoken words, or simply that he has never acquired the proper co-ordination, though no cause exists that would prevent such an acquisition. When the person is mentally competent it is simply a lack of proper education.

All the cases which have occurred, in my experience, have been cured, and the list includes a couple in which the affliction had persisted into young manhood, and whose talk was as unintelligible as the chattering of a monkey.

All are familiar with the story of Demosthenes, who broke himself of his habit of stammering by declaiming on the seashore with small pebbles in his mouth.

Treatment by supporting the tongue by a small ball or by

a spatula, or a more intricate contrivance, has seen several resurrections. Electricity to the thorax and neck, the snipping of a piece from the tip of the tongue, the excising of a V-shaped piece, reading aloud, speaking in a whisper, deep inspirations before every phrase, etc., and internal medication, have all been in turn advocated.

To be cured, these cases must be taken care of and guided by a physician or some one familiar with the physiology of the voice. This is essential, and to trust the instruction to the every day teacher of elocution is a waste of time.

The proper course of treatment is to remove the patient from school (if a child) and keep him from the excitement of games with his companions. He should not be allowed to talk with any one other than his instructor, unless absolutely necessary. With a spatula or two, the tongue, cheeks, etc., can easily be placed in position so that the patient can articulate *a*, and then *e i o u*. These can easily be mastered so that the child can pronounce any of them at will. Then show him how the lips are moved to produce the labials by combination with the vowel position, and then the teeth, tongue, and palate for their own sounds. If one step is taken at a time and persevered in until thoroughly acquired, the subsequent combinations into words and sentences are easily mastered. Some letters will take longer time to learn than others. In one of my cases a boy 14 years of age was unable to make sounds that were anything like *m u g k j*, and who invariably converted *f* into *th*, and *th* and *tw* into *f* and *fá*. It took nearly four months, after all the other defects were remedied, before he could pronounce *j* or soft *ch*, which are usually easy to acquire.

Another case, in which a bright boy (16 years) was totally unable to make the sounds of *k, j, t, c, s, h, q, x*, and a half dozen others were imperfectly pronounced, was, on the contrary, easily cured in a short while.

From his larynx to the tip of the nose and lips the structures were beautifully normal. He had had electricity applied to larynx, dosed with phosphorus and strychnia by different physicians, and had several times been told that

he was incurable. He was an orphan who had been neglected in the institution in which he was brought up, and his speech at the time was to me an unintelligible jargon, and even his sister, who came to interpret, was often non-plussed. A little painstaking explanation, instruction and vocal gymnastics, and forced habit of speaking slowly, inside of a month and a half gave him a voice without a defect.

One boy, unfortunately the last I have had of this description, who spoke almost as badly as the preceding one, we succeeded in curing in three days by means of reading aloud during the hypnotic sleep. Some of the members of this Society probably remember seeing this case at my office last year. He spoke all right at the time, but for purpose of demonstration he was hypnotized, and suggestively placed among the surroundings and incidents of a month before. He then stuttered almost as badly as he had done in the beginning.

After some progress has been made in the case, it is advisable to insist on an avoidance of excitement, and the adoption of a slow, subdued, and even monotonous tone of voice; and we have found that reading, or rather singing, aloud, emphasizing the beats of the metre and paying no attention to the rhyme, is one of the best exercises of these cases.

ART. XI.—Case XVII.*—Multiple Retro-Pharyngeal Abscess.

By JOHN DUNN, M. D., of Richmond, Va.,

CHIEF OF CLINIC OF RICHMOND EYE, EAR, AND THROAT INFIRMARY.

Mr. H., 62, was taken with "malarial fever" the latter part of May, 1892. After a few days, severe pains, neuralgic in character, began to appear in the back of his neck; these pains grew gradually worse; they extended as high as the occipital protuberance; down the back of the neck; and were often felt with great severity in the shoulder-joint; at the same time with the appearance of these pains, there

* The numbering of these cases (continued from January No., 1893), refers to the order in which they are being Selected for Report and Remarks from the Clinic of the Richmond Eye, Ear, and Throat Infirmary.

came a stiffness, a "crick in the neck;" this grew in severity until the least movement of his neck in extension would produce the most violent pains in the back of his head.

When I first saw Mr. H., August 26th, 1892, he was stiff-necked, carrying his head slightly to the right, considerably forward and extended from the body; the least movement of the head would produce the neuralgic pains above mentioned; when he allows his head to fall forward on his chest, he cannot raise it without the assistance of his hands; there has never been any pain in the throat; within the last three or four days, there has been in the throat, however, a sensation of soreness; when the head is at rest, there is an absence of the neuralgia in the back of his neck, and the patient complains only of a "dull, heavy, mean feeling in the head." For the past three or four days, there has been difficulty in swallowing, the attempt causing considerable pain. His physician examined his œsophagus, and found a stricture, spasmodic, about on the level of the cricoid cartilage. All during the attack, there has been more or less fever, especially at night; for the past few nights, it has been severe. No appetite; insomnia; voice normal.

Examination of Throat Externally.—No swelling; no enlargement of the cervical glands; no swelling in the retro-maxillary fossa; no evidence of an internal tumor.

Internally.—Breath offensive, suggestive of cancer; a continual desire to expectorate; slight salivation; in regard to this, the constant desire to expectorate was the only symptom referable to the throat from the 1st of June until the 20th of August. Examination of the pharynx shows a large red swelling situated in the left half of the pharynx; above, it extends up behind the soft palate, becoming smaller as it goes upward; laterally it extends at its middle portion nearly to the central line of the pharynx; below, it bulges and extends below the base of the epiglottis, bulging out the upper part of the pyriform sinus of the right side. The tumor is fiery red on its surface, except in the middle of its lower half, where, in three closely-adjointing places, it is lobulated and whitish, as though it were "pointing." To the touch it is, in its upper part, firm, and, in places, hard; lower, it is elastic; is painful upon pressure. A hypodermic inserted into the most prominent of the three whitish teats allows the escape of a thick pus. A small bistoury is then inserted into this point, when about half a teaspoonful of pus makes its escape; the bistoury is then inserted into the lowest of three whitish points, and this is opened into

the incision above. This large opening gives exit to only a few drops of pus. Patient is told to gargle his throat with hot water for three-quarters of an hour before retiring. Pains in the back of the neck, though less severe than on the previous night, and high fever, make their appearance about 10 o'clock. The pains are so severe that three-eighths grain of morphine are required to allay them.

August 27th.—Attempts to spray the pharynx with cocaine caused the patient to heave, throwing up a part of his breakfast. It evidently comes from the upper part of the pharynx, for it has no odor. The patient remarked, "See, that has never been swallowed, but has remained in my throat." The spasmodic stricture of the œsophagus is sufficiently strong to retain part of the food above it. A further attempt to spray the pharynx causes the patient to vomit. The food this time comes from the stomach. As soon as the pharynx becomes quiet, a small bistoury is plunged into the upper part of pharyngeal swelling; after passing through about one-fourth inch of firm tissue, it passes into a cavity, but no matter follows the withdrawal of the knife. This upper cavity does not communicate with the one opened on yesterday. Twenty grains of salicylate of soda are ordered every three hours; after the first dose, the patient has a pleasant sleep of two hours. The soda further allows him to pass a fairly comfortable night, although he has considerable fever. Fever rose at 3 P. M. At 4 P. M., it was 103° F. At 6 P. M., it was 102° F. Lasted late into the night.

August 28th.—The lower opening into the abscess is further enlarged by forcing into it a pair of dressing forceps, and then opening them. Only a drop of pus escapes. The upper half of the abscess is increasing in size and redness, while the lower half or lower abscess is diminishing in size. Patient this morning is unable to swallow, save after great exertion and many trials, any food, solid or liquid. His attempts result in the food getting into the pharynx, whence it is regurgitated immediately. Fever appeared at 2 P. M. to-day, and at 4 P. M. it was 100.5° F. It lasted until about 6 P. M. It appeared again during the night, and lasted several hours.

August 29th.—At 4 P. M., I was sent for. Mr. S. was suffering greatly. The pains, which began about 11 P. M. in the nape of the neck, have extended to the shoulders, down the arms, into the forearms; and were exceptionally severe. There was, however, but slight fever. Morphine. In con-

nection with the rise of fever, Mr. S. says: "It always begins with a severe pain in the back of my neck, and, as the pain gets worse, the fever increases."

At 9 A. M., both abscesses were further opened, although no pus escaped from either. The upper phlegmon has increased considerably in size during the night, while the lower one has as much diminished. These swellings seem to be a general inflammation, with thickening of all the tissues anterior to the vertebræ in the left half of the pharynx. They show no marked tendency to break down. They bleed very little when incised; are extremely painful to the touch; and in many respects resemble closely carbuncles, as seen on the back of the neck. The general condition of the patient has improved within the past two days. Although the pain last night was exceptionally severe, "it was," said Mr. S., "a more natural pain than I used to suffer before the abscesses were opened."

August 30th.—Patient had considerable fever this morning about 4 o'clock. It lasted, however, much less time than it usually does. Moves his neck with more ease. The lower tumor, which has much diminished in size, is pointing in a fourth place, which was opened. The upper tumor is also diminishing. Patient is able to swallow with much more ease.

September 21st.—Lower half of the swelling has subsided. Upper portion opened for the extent of one inch. Continuance of the fever and pain in the nape of the neck, although the severity of both has much diminished within the past two days. Patient can now eat with a fair degree of comfort. The abscesses have been washed out every day with bichloride—1:2000.

September 4th.—The swellings of the pharynx have much diminished in size. Patient is suffering but little and leaves for home.

November 30th.—The patient did not return. A letter from him, dated November 22nd, says: "My throat seems to be entirely well, but my neck feels stiff, and sore, and numb. The soreness moves about my neck and up in my head."

As a case of retro-pharyngeal abscess, the one above given has several points of interest. *In the first place*, the age of the patient, 62. Retro-pharyngeal abscess is most common among children; it is rare among adults, and the oldest recorded case, except as a complication of purulent mastoiditis, of which I can find record, is 46. There was no compli-

cation which, in this case, might be looked upon as a causative factor. There was no nose or ear trouble that could be made out. The patient had suffered from rheumatism, and had had several severe carbuncles in former years. No specific history. There was no other faucial, maxillary or pharyngeal trouble.

Bosworth says: "When a retro-pharyngeal abscess develops in an adult, it makes itself known at the onset, as a rule, by well-marked symptoms, which call attention immediately to the existence of some morbid lesion in the faucial region."

This patient had never had his attention drawn to his throat as the possible seat of the trouble, until he experienced difficulty in swallowing, a period of nearly three months; during this time, he had thought the trouble was in the nape of his neck.

Bosworth again says (*Diseases of the Nose and Throat—The Throat*, p. 79): "The first symptoms, therefore, to which it gives rise will consist of pain referable to the faucial region. This is aggravated during deglutition—this act being not only painful, but difficult of accomplishment, according to the extent to which the suppurative process has developed."

The trouble here began with this stiffness of the neck and fever. The fever lasted the whole three months; its periods of exacerbation and remission were irregular; at times, there would be only one rise of fever a day; at times, two. Concomitantly with the rise of fever, was increase of the pains in the back of neck; and as the pains would decrease the fever would abate. For three months, he "was treated for malarial fever," although "my pulse, during this time, rarely ever went beyond 80." As said above, the only throat symptom was a slight salivation, which gradually increased. While there was no trouble in passing an œsophageal bougie, the difficulty in swallowing increased to such an extent that finally the patient could not swallow even liquids. The trouble was *reflex spasm of the œsophagus*. Liquids could be gotten into the œsophagus with great effort, but would either remain there or be immediately re-

gurgitated. The pain in the nape of the neck, over the occipital bone, in the shoulders, down the arms, into the fore-arms, down the back, were, in all probability, due to compression of the spinal nerves as they escaped between the vertebræ—the compression being caused by the formations of the abscess in the deep layers of the pharyngeal aponeuroses. It is to be noticed that only a small amount of pus escaped after the opening of the abscesses, which disappeared rather by slow breaking down of their “cores,” than by a true purulent process, resembling closely carbuncles in this respect. Salicylate of soda, in 20-grain doses, acted well at first, but later morphine was required to quiet the pain.

The length of time required for these abscesses to form is suggestive of caries of the vertebral column, but no dead bone could be felt with the probe. The facts that although “the throat seems,” on November 22d, “to be entirely well,” while the “neck feels sore and badly,” show that the original process was not cured by opening the abscesses, or that these unpleasant sensations are due to cicatricial contraction of the diseased pharyngeal aponeuroses.

Clinical Reports.

Case of Supra-Pubic Cystotomy.

By CHARLES MINOR BLACKFORD, Jr., M. D., of Lynchburg, Va.

On February 17th, I was asked by Dr. A. I. Clark, of this city, to see an old man, J. W., who had an obstruction to the passage of his urine. On reaching the house, I found a man 72 years of age, suffering acutely from retention of urine. The bladder was fully distended, no water having passed for about thirty hours. All attempts at passing a catheter proving futile, I aspirated the bladder, drawing off a large quantity of urine, and giving instant relief. Taking advantage of the relief thus afforded, I explored the urethra with acorn-pointed bougies, and found several large-calibred strictures in the anterior urethra, and

a hypertrophied prostate, entirely occluding the normal passage.

The next day, finding the bladder again distended, I aspirated it again, but was still unable to effect a passage with any instrument. I therefore determined on a suprapubic cystotomy, which was performed under chloroform anæsthesia, by Dr. S. P. Preston and myself. After cutting into the bladder, a piece of No. 15 (English) rubber catheter was stitched into the wound, the edges approximated by silk sutures, and an antiseptic dressing applied. The catheter has remained in situ to this time, and the patient is able to go around his house and garden without inconvenience. The end of the catheter is closed by a bit of cork, which is withdrawn to allow the urine to escape. Up to this time there has been no set back of any kind, though the urethra remains impermeable. Sanmetto has been used without appreciable effect.

Correspondence.

United Confederate Veterans

OFFICE OF SURGEON-GENERAL,

156 WASHINGTON AVENUE, CORNER OF CAMP ST.,

NEW ORLEANS, LOUISIANA, April 21, 1893.

Editor Virginia Medical Monthly: The United Confederate Veterans will hold their next Annual Reunion (4th) in Birmingham, Ala., July 19th and 20th, 1893.

The Third Annual Meeting and Reunion was held in New Orleans April 8th and 9th, 1892, and 198 Camps were represented. A number of Camps have since been organized; and Texas alone is said to have over 100 Camps, with about 20,000 veterans.

It is to be hoped that the entire South will at no distant day be covered by the Camps of the Confederate veterans who survive the bloody conflict.

It is of great importance that the medical officers should be thoroughly known and organized, in order that every sick and destitute Confederate veteran may at all times enjoy the skillful attentions of our benevolent surgeons.

As we march along, our ranks are daily thinned by the darts of death. Beauregard and Kirby Smith, our great captains, have just answered the last call.

As the veterans lay their white heads upon the bosom of the Mother Earth who bore them, the hand of no paternal Government with its millions of pensions relieves their wants, soothes their death-beds, or marks with the historic marble their humble resting places.

The privilege of supporting the sick and destitute veteran, and of immortalizing his heroic deeds by the monumental marble bronze, is enjoyed alone by the surviving Confederate Veterans.

Much may be accomplished by organized effort; and to the end that order and efficiency may be secured, I have, as Surgeon-General U. C. V., addressed the following circular, No. 3, to the individual camps:

CIRCULAR No. 3.

156 WASHINGTON AVENUE,
NEW ORLEANS, *April 9, 1893.*

SIR: The officer in command of Camp No. — is respectfully requested to fill this Circular No. 3, with the desired data, and return to the office of the Surgeon-General U. C. V.

1. Camp No.
2. Officer in Command
3. Medical Officer
- “ “ Rank in Confederate Army.....
- “ “ Dates of Commission in Confederate Army
- “ “ Place of Service.....
- “ “ Nature of Service

REMARKS.

4. Number of Members of Camp No
5. Number of Deaths since Organization... ..
6. Number of Disabled Confederate Soldiers attached to Camp No
7. Nature of Injuries.....
8. Number of Indigent Confederate Soldiers attached to Camp No.....
9. Number of Widows of Confederate Soldiers Supported by Camp.....
10. Amount of Money annually appropriated by Camp No. — to the Support of Confederate Soldiers.
11. Amount of Money appropriated by Camp No. — to the Support of the Widows of Confederate Soldiers.....

12. Location and Capacity of Soldiers' Home, Supported by
Camp No

Respectfully your obedient servant,

JOSEPH JONES, M. D., LL. D.,
Surgeon-General U. C. V.

I am daily in receipt of replies containing the desired data. When this work is completed I will endeavor to prepare an abstract for your valuable Journal. With kind regards I remain

Truly yours, JOSEPH JONES, M. D., LL. D.,
Surgeon-General U. C. V.

Proceedings of Societies, Boards, etc.

VIRGINIA BOARD OF PHARMACY.

[Reported by E. R. BECKWITH, Secretary, Petersburg, Va.]

The Seventh Annual Meeting of the Virginia Board of Pharmacy was called to order in the office of the Clerk of the House of Delegates, Richmond, March 27th, at 3:30 P. M. Mr. T. A. Miller, of Richmond, having been appointed to succeed Mr. M. C. Hall, of Fredericksburg, resigned, took his seat and participated in the meeting. Only routine business was transacted at this session. At 10 A. M., the 28th, twenty-nine candidates appeared for examination. The Governor having kindly given the Board the use of the Hall of the House of Delegates, the examination was conducted there. The practical work was conducted by Mr. C. B. Fleet in a room at Polk Miller & Co's drug-store. The following passed successful examinations: L. G. Hughlett, Bedford City; G. G. Congdon, Hampton; J. T. Watson, Onancock; G. M. Turner, Lynchburg; F. F. Allen, Clifton Forge; D. D. Harrison, Manchester; L. E. Wetzels, Richmond; W. J. Adams, Newport News; Fred. W. Fawcett, Danville; W. W. Robinson, Amherst. The following having made 65 per cent. and over, were given Assistants' Certificates, which hold for twelve months: S. J. Carson, Staunton; E. L. Erb, Roanoke; V. O. Bendall, Warrenton; P. H. Casey, Lynchburg; D. M. Calhoun, Richmond.

The Board adjourned at 3:30 P. M., March 31st.

The new Board then met, Mr. J. W. Pierce's (President of

the Board) term expiring, and Mr. Robert Brydon having been appointed in his stead.

The Secretary called the meeting to order. Mr. C. B. Fleet, of Lynchburg, was elected President. The place selected for the next meeting was Lynchburg, provided the President can make suitable arrangements; otherwise Richmond, and October 23rd was selected.

Analyses. Selections, etc.

Some Therapeutic Notes.

Veratrine in General and Menopause Pruritus.—Houdè, in *The Alkaloid*, states that Cheron highly extols veratrine in general pruritus, as well as the localized pruritus of the menopause. Many physicians have repeated his experience with equally happy results. [*For local use*, unguentum veratrinæ contains veratrine, 4 parts, alcohol 6, benzoinated lard 90 parts. Oleatum veratrinæ contains veratrine, 2 parts, oleic acid 98 parts. *For internal use*, the dose of veratrine is from one-fiftieth to one-tenth of a grain. It is only slightly soluble in cold water; soluble in 3 parts of alcohol at 59° F.; in 6 of ether; in 2 of chloroform; in 96 of glycerin, and in 56 of olive oil.]

Trional—the New Hypnotic—belongs to the chemical class of bisulphones. In the delirium of insanity and insomnia of neurasthenia, it is specially useful, as it has no unpleasant sequelæ. The sleeplessness occurring in nervous diseases—whether functional or organic—is said to be relieved by a single dose of fifteen grains. According to investigations in the Utica Insane Asylum of New York, this dose produced eight hours' quiet and uninterrupted sleep in an average of fifty-eight minutes. It is useful also as a hypnotic in cases of severe bodily pain. It is a safe, efficient, prompt and pleasant hypnotic. It is usually given in some hot fluid, as gruel or beef tea—being only partially soluble in water, etc.

Iodized Glycerin a Radical Cure of Hæmorrhoids.—Preissmann (*N. Y. Med. Times* May, 1893), with great success for piles, uses applications containing iodine. He uses a weak or a strong solution, according to the sensibility of the patient. The weak solution consists of potas. iodide, gr. ij; iodine, gr. $\frac{1}{4}$ th; glycerin, gr. xxxv. After a lukewarm hip bath, apply to the affected part by means of a piece of wad-

ding dipped in the solution; renew every hour or two, as needed. The cure being radical, compensates the slight sensation of burning occasioned by the applications.

Arsenious Acid the Remedy for Psoriasis.—Dr. B. Merrill Ricketts, of Cincinnati, reports (*Jour. Amer. Med. Assn.*, April 29,) 40 successive cases treated by the following, with the result of cures in each case:

R_x.—Acid. arsenici.....℥j.
 Acid. hydrochloric., dilut'...3ss.
 Aquæ..... ʒiiss.—Mix.

Ten minims of this contains one-tenth grain of arsenious acid, held in solution by the muriatic acid. He has found as little as one-fiftieth grain arsenious acid daily sufficient in some cases, whereas one case required a daily quantity of 24^{ths} grains for 18 days—proving that the dose is variable in different persons. Fowler's solution is not reliable.

Acetanide of Eugenol is highly antiseptic, is not caustic, and, being a local anæsthetic, is proposed as a substitute for cocaine. It is obtained from oil of cloves. (*St. L. Cour. Med.*, April, 1893.)

Prevention of Bromidism.—Féré claims (*Jour. Amer. Med. Assn.*, April 29,) that bromidism may be prevented by combining an intestinal antiseptic with the bromide salt being used, as the following for each dose:

R_x.—Potassii bromidi..... 3ss.
 Beta naphthol.....℥j.
 Sodii salicylat..... ʒss.—Mix.

This combination is considered curative, as well as preventive, of bromidism.

Salicylate of Ammonium versus Salicylate of Sodium.

Dr. G. W. Moody, of Shelbyville, Tenn., in discussing a paper on the *Salicylates*, by Dr. Sims, before the Medical Society of Tennessee, said: "I want to call attention to the superiority of salicylate of ammonium over salicylate of sodium in cases marked with debility, or where the remedy is needed in large doses, or when it is to be continued for a long time. Large continued doses of salicylate of sodium are depressing to the nervous centres and to the heart. Salicylate of ammonium is not so enervating, the ammonia antagonizing the depressing effect of the salicylic acid. The salicylate of ammonium can be extemporized by combining one-half grain of carbonate of ammonium in solution with one grain of salicylic acid, or by dissolving salicylic acid in liquor ammoniæ acetatis."

Progress of Surgery.

During the session of the Medical Association of the State of Alabama in Selma, April 18-21, 1893, in the Report on Surgery, Dr. L. L. Hill, of Montgomery, spoke in glowing terms of Sir Joseph Lister's teachings of asepsis and antiseptics; of *Lannelongue's operation on microcephalic idiots*, and reported one of six years of age operated on by himself, in which there has been mental improvement. The operation has been performed 44 times, with 9 deaths. *Cerebral tumors*, as shown by 580 cases collected by Seguin and Weir, are most often tubercular in character and next in frequency to sarcomata. Victor Horsley established the operation for their relief among the legitimate operations, though the first operation was performed by Mr Godlee in 1884. *Rose's operation for the removal of the Gasserian ganglion* for neuralgia of the fifth nerve was described. Rose's operation has been performed seven times, and there has been no return of pain in any of them, though $2\frac{1}{2}$ years has elapsed since the first operation. Dr. Dana's pathological investigation made in 1891 showed the disease to be due to a deficiency of blood supply, and not to any change in the nerve tissue proper. *Laparotomy for gun-shot wounds* was next considered. Dr. Robert Kinloch, of Charleston, was the first operator, though Prof. W. T. Bull, of New York, reported the first successful case in 1885. Dr. Coley's statistics show that the mortality had been reduced from 88 per cent. to 67 per cent. since the abandonment of the expectant treatment. *Abdominal section in perforating typhoid ulcer* was recommended. Of 19 cases operated upon, four recovered, though there was probably a mistake in the diagnosis in two of the successful cases. Maissonneuve originated the operation of *intestinal anastomosis*, though Prof. Senn revived it in 1887. He condemned all artificial aids to accelerate the operation, as the decalcified bone-plates or cat-gut rings are liable to cause leakage, obstruction, and irritation of the interior of the bowels. He insisted upon the opening in the intestines being at least four inches in length, as recommended by Abbe, to prevent cicatricial contraction. *Surgical interference in acute suppurative appendicitis* was proposed by Dr. Willard Parker in 1867, though Prof. Sands reported the first successful case operated upon in 1888. He condemned the method of operating in the interim of attacks. After a description of *Gaston's operation of duodeno-cholecystotomy*, its superiority over Winniwater's of Vienna was claimed on account of getting the physiological action of the juice in

digestion. The treatment of aneurism by the needle, as recommended by Macewen, of Glasgow, was explained.

Discussion—Dr. Hogan, of Union Springs, thought well of Murphy's buttons in intestinal surgery.

Dr. W. E. B. Davis reported a case operated on by his brother, Dr. J. D. S. Davis, in which a large number of gall stones had been removed and the patient made a good recovery. He does not favor Tait's operation for the cure of hernia, and thought most of them unsatisfactory. He condemns artificial aid, as decalcified bone-plates and cat-gut rings in intestinal anastomosis.

Dr. R. M. Cunningham, of Pratt's Mines, does not agree with Dr. Agnew, as quoted by Dr. Hill: "That every fracture of the skull with depression, however slight, in view of the late after-effects, should be trephined," as he had seen many such cases among the penitentiary convicts in Alabama, with similar injuries, without any bad after-effects. He emphasized Dr. Hill's remarks with reference to operating in cases of typhoid perforation, as he thought it the proper thing to do, though he had never had the courage to operate. He thought Dr. Hill had left out the most important operation for the cure of hernia—Marcy's.

Dr. Hill, in closing, said that there are innumerable operations for the radical cure of hernia. As to which is the most important, depended upon the individual taste of the surgeon.

Piperazine and Phenacetine in Gouty Conditions.

Piperazine, in combination with phenacetine, has a very marked influence in gouty conditions on account, probably, of its effect on the absorption of toxic exudates. The value of piperazine as anuric acid solvent, and in the treatment of impure conditions of the blood consequent upon the uric acid diathesis, have, in fact, been fully demonstrated. But the cost of the drug rendered it not available for hospital and general practice. In the uric acid dyscrasia, as in all the diatheses, the best results are only to be obtained by a continuous use of the remedy, but costly drugs tend to discourage patients who are likely to discontinue treatment before a cure is assured. Hence, the discovery (by the Farbenfabriken, vorm. Friedr. Bayer & Co.) of a process for the manufacture of Piperazine, by which its cost is reduced about one-half, may be regarded as a great, practical advance in uro-lithiatic therapeutics. The success of piperazine seems now to be assured.

Some Uses of Aristol.

Dr. Richard H. Gibbons, of Scranton (*Times and Register*) first employed aristol after an operation for the removal of a cancerous mammary gland. The entire wound approximation was dusted with aristol. The lesion was dressed and closed for eight days, when complete union had taken place. Since then he has used aristol for all wound surfaces, exterior and cavital. In all operations about the anus and rectum he has found this remedy of great value. Dr. Gibbons had equal success with aristol in diseased conditions of the eye, ear, nose, vagina, cervix, the female urethra, etc. He made satisfactory use of it also in suprapubic cystotomy, and in internal urethrotomy. The powerful effects of aristol to promote rapid cicatrization led him to employ it in special operations for the relief or cure of malignant disease of the female mammary gland. In the six cases cited the success achieved was remarkable. The results obtained as a protection to wounds and ulcerated surfaces, and as stimulation to granulation, have been satisfactory to an extreme degree. In all cases of abdominal surgery he uses aristol, and finds it the ideal protective, having had no cases of breaking down of the wound of entrance as has happened in several cases where he has used iodoform.

Book Notices.

Diseases of the Skin. By CHARLES C. RANSOM, M. D., Assistant Dermatologist Vanderbilt Clinic, New York. *One of the Students' Quiz Series.* Edited by BERN B. GALLAUDET, M. D., Demonstrator of Anatomy, etc., College Physicians and Surgeons, New York, etc. Philadelphia: Lea Brothers & Co. Large 12mo. Pp. 201. Cloth, \$1. (From Publishers.)

This *Manual for Students and Practitioners*, arranged in the form of questions and answers, covers the essential points of the several standard text-books on diseases of the skin. Either for the student or the practitioner to catch up quickly the chief points of description, diagnosis or treatment of a given disease, this is a most valuable work. Indeed, it is a most excellent guide-book for the practitioner, while for professor or student, it is invaluable as a review work. The questions are comprehensive, and the answers are terse enough to be quickly read, and clear enough to be fully understood.

Diseases of the Nervous System. By DR. LUDWIG HIRT, Professor at the University of Breslau. *Translated, with permission of the author, by AUGUST HOCH, M. D., assisted by FRANK R. SMITH, A. M. (Cantab.), M. D., Assistant Physician to Johns Hopkins Hospital. With an Introduction by WILLIAM OSLER, M. D., F. R. C. P., Professor of Medicine in Johns Hopkins University, etc. With 178 Illustrations.* New York: D. Appleton & Co. 1893. 8vo. Pp. 633. Cloth, \$5. (For sale by West, Johnston & Co., Richmond.)

The thanks of the American profession are due to the translator for bringing to their attention a book so accurate in description, excellent in diagnosis, and serviceable in therapeutic advice. The author everywhere shows familiarity with the literature of his subjects; but he has utilized such writings in order that he may the better perfect himself as a clinician. The result is that he has brought forward a text-book for practitioners and students of very great value—indeed a work which the general practitioner cannot well afford to be without. Athetosis is taken only as a symptom; nerve stretching for neuralgias is condemned; hypnotism and treatment by suggestion are recognized as valuable aids in treatment; and everywhere we see that the most recent of positive advances are adopted. In short, just such a book as this on nervous diseases was greatly needed by practitioners. The illustrations are all good and help most materially to give a clear understanding of the special diseases so illustrated.

Healthy and Diseased Nerves. By DR. FREIHERR R. VON KRAFFT-EBING, Professor Medical Faculty at Royal and Imperial University of Gratz. *Translated from the German by permission by Dr. WM. GREBE, Richmond, Va. Southern Clinic. 1893. Large 12mo. Pp. 102. Cloth. (From Author.)*

This is a good book to impress the causes, results and treatment of "diseased nerves." "Fast living," sensuality, excesses, over-work, etc., are the causes; nervous irritability, prostration, premature decay, etc., are the results; as to treatment, better moral education and authoritative oversight, are required, regulation of diet and relief of constipation, etc., are essential, avoid abuse of stimulants, and use mostly the sedative class of drugs—especially the bromides. The author has written in a most entertaining strain, and the translator has done his part admirably well, and has issued a book that will enchain attention while it instructs and leaves suggestions of value for every family physician particularly.

Diseases of the Skin. *Their Description, Pathology, Diagnosis, and Treatment, with Special Reference to the Skin Eruptions of Children.* By H RADCLIFFE CROCKER. M. D., London, Physician for Diseases of the Skin in University College Hospital, London, etc. *Second Edition. Revised and Enlarged.* With 92 Wood-cuts. Philadelphia: P. Blakiston, Son & Co. 1893. 8vo. Pp. 987. Cloth. \$5. (For sale by West, Johnston & Co., Richmond.)

This treatise is written from the standpoint of a practitioner who writes what he knows, and states facts in a manner to impress his readers. Being thus prepared, it is a book admirably suited as a text-book for student and teacher. In this respect, the author speaks well in advising what subjects should be first mastered, and he enumerates the diseases of common occurrence which should be first studied. The symptoms of skin diseases are made a most important part of the work, as also the detail of treatment in given cases. Beside numerous formulæ in the body of the book, others are appended, with statements as to their special uses. Being right up to date, with its other marks of excellence, we know of no one text book we could so cordially recommend to those of our readers in search of the best book on skin diseases.

Hand-Book of Massage. By EMIL KLEEN, M. D., Ph. D., Practising Physician in Carlsbad, Bohemia. *Authorized Translation from the Swedish,* by EDWARD MUSSY HARTWELL, M. D., Ph. D., Director of Physical Training in the Public Schools of Boston, etc. Philadelphia: P. Blakiston, Son & Co. Cloth. 8vo. Pp. 316. \$2.75. (For sale by West, Johnston & Co., Richmond.)

This is a very useful book at this time, when mechanotherapeutics is being so generally discarded because of the extreme views of blatant enthusiasts. Dr. Kleen discusses the whole subject from the standpoint of a practitioner of medicine, and not as a specialist, which he distinctly asserts he is not. He takes the sensible view that massage is simply "a remedial measure, among many, that is capable of being frequently employed, but which is seldom to be resorted to by itself alone." The fact that Dr. S. Weir Mitchell introduces the book to the American profession with the following sentence: "I know of no other book on this subject which is so good as this," will give it a due prominence among the authoritative treatises on the subject. Contra-indications as to the demand for massage are clearly stated. It is a good book—for practitioners and nurses.

Hand-Book of the Diagnosis and Treatment of Diseases of the Throat, Nose, and Naso-Pharynx. By CARL SEILER, M. D., Instructor in Laryngology and Lecturer on Diseases of the Upper Air-Passages, in the University of Pennsylvania, etc. *Fourth Edition, thoroughly Revised and greatly Enlarged.* Illustrated with two lithographic plates, containing ten figures and 107 engravings. 12mo. 414 pages. Cloth, \$2.25. Philadelphia: Lea Brothers & Co. 1893.

It is seldom, indeed, that we find a "hand-book" prepared by a recognized authority as a specialist so well adapted to the wants of the general practitioner as is this work. As compared with the former editions, we find much that is new in the present one. Points of diagnosis, the relation of local diseases or conditions to the general system, and the details of treatment, are stated apparently with an eye alone to daily needs. Among such new material, we find the bold statement, sustained by evidence, that the author has observed a peculiar condition of the mucous membrane in the upper air-passages which enables him to diagnose uterine trouble merely by inspection of the larynx and pharynx. "A distinction can even be made between uterine and peri-uterine disease." "When the condition referred to is more pronounced in the larynx and pharynx, the cause is intra-uterine; while, if it is more apparent in the upper pharynx and naso-pharynx, the cause may be looked for in the ovaries and tubes." The chapter on influenza, or "American grippe," is entirely rewritten; a new chapter on intra-nasal neoplasms, etc., are among the numerous additions found in this edition. In short, it is a most valuable hand-book, and ought to be in every practitioner's library.

Hand-Book of the Diseases of the Eye, and their Treatment.

By HENRY R SWANZY, A. M., M. B., F. R. C S. I., Surgeon to the National Eye and Ear Infirmary, and Ophthalmic Surgeon to the Adelaide Hospital, Dublin, etc. *Fourth Edition, with Illustrations.* Philadelphia: P. Blakiston, Son & Co. 1892. Cloth. Demi 8vo. Pp. 518. (For sale by West, Johnston & Co., Richmond.)

The recognized value of this work is attested by the fact of the issue of four editions in rapid succession—each one affording the author opportunity for improvements and additions. As a text-book for students, this is a most valuable work, because it starts off with the idea that the student begins his course with no knowledge of his subject. It sys-

tematically leads him up higher and higher until the chapters of practical ophthalmology are reached, when the text becomes a most valuable book for the practitioner. In an Appendix to this edition, Holmgreen's Method for Testing the Color-Sense is described in fuller detail than formerly, and some new illustrations have been added to illustrate the revisions and additions in this fourth edition.

Hand-Book of Insanity for Practitioners and Students. By Dr. THEODORE KIRCHHOFF, Physician to the Schleswig Insane Asylum, etc. *Illustrated with Eleven Plates.* New York: Wm. Wood & Co. 1893. Demi 8vo. Pp. 362. Maroon parchment muslin, \$2.75; flexible leather, gilt top, \$3.50. (From Publishers.)

Without preface or explanatory note, this book dips at once into its subject from the standpoint of experience and observation of one who has had medical charge of the insane, and who has studied insanity from its anatomical bearings. It deals chiefly with the more pronounced forms of insanity, and seeks, in general terms, to give a correct idea of what causes and constitutes the condition so as to enable the student to understand the subject, and the practitioner to recognize the condition. The sections on diagnosis of mental disorders and their border lines, on treatment, etc., are especially valuable. This is a work of great practical utility to the profession, and well represents the scientific views of the day.

Hand-Book of Materia Medica, Pharmacy and Therapeutics
By SAMUEL O. L. POTTER, A. M., M. D., M. R. C. P., London, Professor of Theory and Practice of Medicine, Cooper Medical College of San Francisco, etc. *Fourth Edition, Revised.* Philadelphia: P. Blakiston Son & Co. 1893. 8vo. Pp. 781. Cloth, \$4.; leather, \$5. (For sale by West, Johnston & Co.)

Undoubtedly for general use—either by professor, practitioner or student—this *Hand-Book* is the one on *Materia Medica, Pharmacy and Therapeutics* to be specially recommended. It includes descriptions of "the physiological action of drugs, the special therapeutics of disease, official and practical pharmacy, and minute directions for prescription writings." The articles of the materia medica are named alphabetically, and each is considered as to its preparations, physiological action, and therapeutics, analogues, toxicology, antidotes, etc. This Part covers about 370 pages. Following this is Part II of over 70 pages, relating to pharmacy

and prescription writing—a most excellent chapter—and incompatibilities, extemporaneous preparations, etc. Part III on special therapeutics takes up about 214 pages—the names of the disease, etc., being arranged alphabetically, while the specially useful remedies for the given disease or condition are pointed out in the order of their importance, etc. The Appendix, of about 40 pages, contains a great many of the odds and ends of information constantly needed by the practitioner. The Index seems to be nearly perfect. The work, in short, is the best thing of the kind we have seen, and the price very moderate. To make it a thoroughly ready reference book, the volume is issued with a thumb index.

Editorial.

Medical Society of Virginia—Session 1893.

At a meeting of the physicians of Charlottesville and University of Virginia, Tuesday, October 3d, 1893, was selected as the time for convening the Twenty-fourth Annual Session of the Medical Society of Virginia; and, according to present plans, the Levy Opera-House, in Charlottesville, Va., will be the hall. The Committee of Arrangements are: Drs. E. M. Magruder (chairman), Hugh T. Nelson, Paul B. Barringer, W. N. Randolph, and L. E. Flannagan—all of Charlottesville, Va., except Dr. Barringer, whose post-office is University Station, Charlottesville, Va. As it is the intention of the local profession and of the officers of the Society to make the approaching session a memorable one in its history, it is to be hoped that all members will make special efforts to secure the desired results. Notes of progress will be made in this journal from time to time during the year.

Dr. J. W. Williams—Personal Card.

We take pleasure in asking special attention to the *Personal Card* of Dr. J. W. Williams, of Richmond, Va. (in-stitched between pages 42 and 43), with reference to the unauthorized use of his name in some of the advertisements of the Virginia Liquor and Opium Cure Company. Dr. Williams published this card in *The State*, of this city, April 22nd, which he is anxious shall be made more public. We hope this card will remedy the misunderstanding.

Professional Compliments to Virginia Doctors.

We do not recall that any State has ever been so honored as Virginia now is in having at the same time the Presidents of three of the largest and most influential medical organizations of the United States. Dr. Hunter McGuire, of Richmond, enjoys the rare compliment of having been elected unanimously on first ballot last June, in Detroit, President of the American Medical Association, and is to preside during its session in Milwaukee, Wis., June 6th—9th. Dr. Chas. W. P. Brock, also of Richmond, was likewise unanimously chosen last May President of the Association of Railway Surgeons of the United States, and is to preside during the session in Omaha, Neb., May 30—June 2d inclusive. During the session of the Southern Surgical and Gynæcological Association last year, in Louisville, Dr. Bedford Brown, of Alexandria, Va., was unanimously chosen its President, and is to preside during the session next November in New Orleans. While each of these able and distinguished gentlemen is worthy of the honor he bears, it is sincerely to be hoped that the profession of the South will recognize these elections as a compliment to their section, and as an expression of earnest desire on the part of the national bodies that the Southern doctors will become fully identified with these almost continental organizations. Other compliments shown Virginia doctors by National Medical bodies last year were the election of Dr. Hugh M. Taylor, of Richmond, Secretary of the Association of the State Medical Examining Boards of the United States; and the election of the Editor of this journal as Vice-President of the Association of Medical Editors of the United States for the current term—Dr. Culbertson, Editor of the *Journal of the American Medical Association*, being the President; also the election of Dr. Joseph A. White, of Richmond, as a member of the Executive Committee of the Section on Laryngology and Otology of the American Medical Association.

Open Sesame

Is one of the neatest books we have seen, dedicated to Wm. R. Warner & Co., of Philadelphia, Pa., by their representative, A. D. Roach. On each left hand page is a selection of good taste and morals about the good wife; on the right hand pages are certificates from seventeen of some of the most distinguished of American practitioners, extolling the elegance and excellence of "Pil. Chalybeate Comp."

Cholecystotomy for the Establishment of an Artificial Fistula Between the Gall Bladder and the Duodenum.

In the *Medical Record*, December 10th, 1892, Dr. J. B. Murphy, of Chicago, Ill., cites a number of cases by various surgeons of cholecystotomy for the establishment of an artificial fistula between the gall bladder and duodenum in order to re-establish a channel for the discharge of bile into the intestine. The operation was undertaken because of obstruction of the ductus communis choledochus by gall stones, which impaction could not be removed. In his enumeration of the earlier cases of this operation for this distinct purpose, he fails to give credit to Dr. Jacob Michaux, of Richmond, Va., for his case reported in the *Virginia Medical Monthly* February, 1888. According to Dr. Murphy's chronological enumeration, Dr. Michaux' case ranks second or third—his operation with this sole object in view having been performed in November, 1887. When he performed the operation, so far as Dr. Michaux knew, as indicated by a foot-note to the article, there was no publication of a previous operation for the purpose. He derived his suggestion from the famous work of Mr. George Harley, which suggestion Dr. Murphy also alludes to in his article in the *Medical Record*.

Of course, operations for removal of gall-stone and drainage of hepatic abscesses, etc., were common enough, but Dr. Michaux's case followed simply the *suggestion* of Mr. Harley, that hepato-intestinal fistula might be beneficially established to meet future demands, and restore the flow of bile into the intestine to perform its essential purposes in duodenal digestion.

Bureau of Information and Service for Doctors Attending the Columbian Exposition.

Doctors from all parts of the World visiting the Columbian Exposition in Chicago, opened on May 1st, should keep in mind, as valuable information for themselves, that Messrs. Chas. Truax, Greene & Co., have authoritatively established a Bureau of Information and Service for the purpose of aiding doctors to secure board, etc. They also provide a sitting room, a reading room, etc., and will cheerfully furnish such information as they can about the Exposition, etc.

Eleventh International Medical Congress.

Rome, Italy, September 24th—October 1st, 1893. *American National Committee*.—Drs. A. Jacobi, 110 W. Thirty-fourth street, New York, *Chairman*; W. T. Briggs, Nashville, Tenn.; H. P. Bowditch, Boston, Mass.; S. C. Busey, Washington, D. C.; C. Cushing, San Francisco, Cal.; N. S. Davis, Chicago, Ill.; Norman W. Kingsley, D. D. C., New York; Wm. Osler, Baltimore, Md.; Wm. Pepper, Philadelphia, Pa.; F. Peyre Porcher, Charleston, S. C.; Chas. A. L. Reed, Cincinnati, O.; D. B. St. John Roosa, New York; Alex. J. C. Skene, Brooklyn, N. Y.; James Stewart, Montreal, Can. Gentlemen who intend to participate in the Congress should forward their *applications at an early date* to the Central Committee. The admission fee of five dollars may be sent to the Treasurer, Professor L. Pagliani, Rome, Italy; in return, the ticket of membership will be forwarded. A visiting card, containing name and address, should be sent with each application, to facilitate exact spelling. *The Chairman offers his services to whosoever will direct him to forward both application and fee.* Papers must be announced at headquarters, on or before June 30th, and abstracts be received on or before the 31st of July.

The Statue of Dr. J. Marion Sims,

In Central Park, New York city, is the only one erected in America. Surely the Southern profession should somewhere erect one. The Legislature of Georgia erected one in Atlanta to the memory of the Discoverer of Modern Surgical Anæsthesia, Dr. Crawford W. Long, of Athens, Ga. Why may not his native State likewise raise a monument to the greatest man in the history of medicine in this country, Dr. J. Marion Sims?

The Section on Laryngology and Rhinology,

Of the Pan-American Medical Congress, is now thoroughly organized, with Secretaries in all the countries of South America, as well as in the United States and Canada. The President, Dr. E. Fletcher Ingals, of Chicago, is making a thorough canvass to secure a large number of good papers for the Section, and feels assured of success. All physicians interested in this Section are requested to correspond with the Secretaries for the United States. Dr. J. Maron y Alonso (Spanish-Speaking), Las Vegas, N. M. Dr. T. Morris Murray (English-Speaking), Washington, D. C.

Association of American Medical Editors

Will hold its Annual Session in Milwaukee, Wis., Monday evening, June 5th. The *Journal of the American Medical Association*—the Editor of which is President of the Association— informs us that the officers have resolved to make a great effort during this session to perfect the organization, and have every regular medical journal in the country represented; also to create renewed interest in medical journalism, etc. Hence Mr. Ernest Hart, the distinguished editor of the *British Medical Journal*, has been invited to deliver an address. Dr. J. Stanley Hall, President of Clark University, at Worcester, Mass., one of the editors of *Journal of Psychology*, and in charge of the most complete laboratory for psychological research in America, will also address the Association, probably on some psychological point. We so thoroughly recognize the value of an Association such as Dr. Culbertson wishes to make this that we most cheerfully proffer our cordial help.

Modern Homœopathy—Its Absurdities and Inconsistencies.

To William W. Browning, A. B., LL. B., M. D., of Brooklyn, N. Y., Lecturer upon, and Demonstrator of Anatomy, Long Island College Hospital, etc., has been awarded the Prize of \$100, offered by Dr. Geo. M. Gould, of Philadelphia, Pa., for the best Essay presented on the above subject. His ventilation of the absurdities and inconsistencies of this school of practitioners is so thorough that the prize was well won, and the essay is well suited to people who wish to see the inwardness of pretensions. It seems strange—and yet it is true—that many people like to be humbugged. Of course such as Flower, homœopathy, and like ridiculous nonsense, well suit that class. But if honest intelligence desires a full insight into the subject, let it have this pamphlet of information. To enable those who wish such information, the publisher (Dr. Geo. M. Gould, 119 South 17th street, Philadelphia, Pa.) will sell a dozen copies of this pamphlet for 75 cents.

Medical College of Virginia.

In noting the advertisement of the Medical College of Virginia on the card-board facing advertising page 35, we should state that the vacant chair of Professor of Surgery will be filled this month by the Board of Visitors. Several candidates are in the field.

Medical Examining Board of Virginia.

The examinations were held in Richmond, Va., April 18, 19 and 20, and the Board held meetings April 25, 26 and 27 to examine the papers of the applicants for license. There were 86 applicants. About 20 per cent. failed. Dr. Hugh M. Taylor, of Richmond, Va., was re-elected President of the Board for the term of four years; Dr. C. C. Conway, of Rapidan, Va., Vice-President; Dr. Benjamin Harrison, of Richmond, Va., was elected Secretary as Dr. Michaux declined re-election. Because of the immense amount of work crowded upon the new Secretary and the lateness in the month before he could begin compilation of tables, etc., we are reluctantly compelled to postpone the publication of the usual report of the Board until our June number.

Cincinnati College of Medicine and Surgery.

Dr. J. Thrush has resigned the Chair of Theory and Practice of Medicine, in consequence of ill health, and the vacancy has been filled by the transfer of Dr. E. W. Mitchell from the Chair of Materia Medica and Therapeutics. Dr. G. A. Fackler, Professor of Materia Medica and Therapeutics at the Womens' Medical College of Cincinnati, has accepted the appointment to the vacancy created by the transfer of Dr. Mitchell. The College moved into its elegant new building, on Vine street, near Liberty, January 1st. A change has been made with particular reference to the farther development of the Clinical Department of the school.

Dr. J. B. S. Holmes' Sanitarium at Rome, Ga.,

Destroyed by fire last January, will be rebuilt at once, and ready for occupancy probably in November. Until then Dr. Holmes has leased some residences and fitted them up for reception of patients. All parties interested can thus be provided for. A special department has been provided for male surgical cases. We sincerely hope that Dr. Holmes will meet with no further misfortunes, for his institution has proven too valuable to the ladies who have sought his surgical services, etc.

Pocket Surgical Cases, Saddle Bags, etc., Cheap.

We invite special attention to the advertisement of Mr. A. H. Robins, whose goods are good, and whose prices are the cheapest. A visit to his new store will well repay doctors, pharmacists, etc., visiting the city.

Candidates for Assistant Surgeons U. S. Marine Hospital Service.

A board of officers will be convened at Washington, D. C., June 26, 1893, for the purpose of examining applicants for admission to the grade of Assistant Surgeon in the U. S. Marine Hospital Service. Candidates must be between twenty-one and thirty years of age, graduates of a respectable medical college, and must furnish testimonials from at least two responsible persons as to character. For further information, or for invitation to appear for examination, address the Supervising Surgeon-General U. S. Marine Hospital Service, Washington, D. C.

Dr. Llewellyn Eliot

Was elected President of the Medical Association of the District of Columbia at its regular semi-annual meeting, held April 4th, 1893. This is a special honor for one so comparatively young in years and in membership to receive. His indomitable energy, great zeal, and rising position in the Washington profession warrant the belief that under his administration the Association will steadily grow in membership and in professional influences.

Dr. John W. Nash,

Who has been Surgeon to the Virginia Penitentiary in this city, has been elected Second Assistant Physician to the Eastern Lunatic Asylum, at Williamsburg, Va. He is a member of the Medical Society of Virginia, where we hope soon to find all worthy practitioners in the State. Dr. Nash is a most excellent gentleman, and represents the highest type of conscientious physicians.

Crowded Out.

Although we have issued a journal of 112 pages this month, much "copy," prepared for the number, has been crowded out.

Sugar-Coated Pills.

I have used I may say over 200,000 of Warner & Co.'s various kinds of sugar-coated pills, extending over a period of five years, and can say without hesitation, that they are the most satisfactory in every way that I have ever met with.—ARTHUR H. WOOD, L. R. C. P. E., London.

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Original Communications.

ART. I.—Notes on Cataract Extraction.

By W. H. BATES, M. D., of New York, N. Y.

ASSISTANT SURGEON NEW YORK EYE INFIRMARY, ETC.

A prominent ophthalmologist was performing a cataract operation. An accident happened; there was some hesitation and delay, and the eye was lost. After it was all over the operator said: "I knew what to do, but I forgot." It seemed to me a good thing to know what to do and not to forget; and so these notes were prepared.

The late Dr. C. R. Agnew, of New York, who was justly celebrated for his skill as a cataract operator, used to say that during an operation the operator should watch his patient to divine what he is going to do next—comparing the operator and patient to two pugilists or fencers. Before the patient squeezes or makes some other sudden injurious movement of the eye, he may hold his breath, or there may be some ill-defined expression of the face which can be recognized in time—prepared is forearmed.

Many successful operators advise: Avoid unexpected movements which startle the patient; patient squeezes and

harm follows. Tell the patient when you are going to touch the eye. Do not take the patient by surprise. Operator should obtain control of the patient by mild or severe measures. Obtain patient's confidence by touching the eye and asking, "Does it hurt?" Take care in using cocaine long enough—till anæsthesia is produced—from 10 minutes to 2 hours. Lessen anxiety of the patient by cheerfulness. Omitting speculum and fixation forceps lessens squeezing. Do not keep the eye open long at a time.

Short operation: In time the eye becomes sensitive. One should remember that the endurance of the best patient is limited. Patient should be advised to breathe naturally, for when he holds his breath he may squeeze out the vitreous, etc.

During the past five years I have been making notes on the following points connected with *cataract extraction*, according as fact, experience, reading or suggestion prompted—all the time, however, revising the notes (intended solely for practical purposes)—as accumulated information or study led me to think they needed.

1. FAVORABLE CASES: Cannot count fingers; whole lens opaque; no red reflex. Can count fingers; fundus indistinct. Sclerosed [sclerosed lens, the shadow by oblique illumination is on the same side as the light.] lens cloudy; no clear spaces between striæ; color, white, yellow, red, black. Projection good; tension normal; the other eye healthy; absence of disease which is apt to be in the cataractous eye; myopia, retinitis, choroiditis, etc.

2. UNFAVORABLE CASES: Immature cataract; clear spaces between striæ; front part of lens clear and can or cannot count fingers; wait or do Förster or Pooley. Tension + or —. Opacity cornea; post synechia; myopia; pterygium; conjunctivitis; blepharitis; dacryo-cystitis; nasal catarrh with and without discharge; disease in the other eye which is apt to be in both; ill health; obesity. Hypermature cataract; small nucleus difficult to remove, and front part of the vitreous is usually fluid. Projection faulty or no perception of light; do not operate.

3. PREPARATION OF PATIENT: Bowels moved the day before and the day of the operation; bath. Train the patient to obey orders; to look down, up, right, left, and not to squeeze the eye shut—very important. Patient should become accustomed to handling. Nervous patients; wait till nervousness passes off.

4. INSTRUMENTS: *Speculum* not used if patient cannot be controlled; vitreous may be lost, etc. Manipulations can be made as easily as during the removal of a foreign body from the cornea. The operation without speculum or fixation forceps has advantages: Absence of nervous strain from the presence of the speculum and fixation forceps; patient is less apt to squeeze lids and lose vitreous; less local shock, and wound consequently heals better; speculum and fixation forceps irritate the eye; accidents fewer; less straining of the recti muscles, and the globe is not drawn backward into the orbit—a cause of loss of vitreous, hæmorrhage, etc.

Graefe Cataract Knife: Narrow, hollow ground. Back and edge should be straight, or the aqueous escapes before the counterpuncture is made. Sharp on the point and the whole length of the edge; should be tested just before using by operator himself. A dull knife is often used, and is a frequent cause of failure.

Speculum—Retractors—Strabismus Hook: Care not to press on the globe with instruments used to separate the lids during operation; if patient squeezes, lift the speculum from the globe, or the vitreous will be lost and the operation be a failure.

Fixation Forceps: The teeth are sometimes imperfect, and fail to grasp the conjunctiva.

Cystotome: Sharp on the point and some distance from the point. A sharp cystotome is rare. (a) A dull cystotome causes a lacerated wound of the capsule, a wound that causes inflammation and opacity of the capsule; capsule opaque, poor vision. (b) A dull cystotome does not readily open the capsule, and efforts are often made to remove the lens when the capsule has not been sufficiently opened;

capsule ruptured by pressure and vitreous lost, and poor vision obtained. (c) A dull cystotome may dislocate the lens during capsulotomy, and the subsequent removal of the lens be difficult.

5. ANÆSTHETIC: *Cocaine*, 2 per cent. to 4 per cent. Time used, 10 minutes to 60 minutes +; the more nervous the patient, the greater the congestion of the eye, the longer is the time necessary to anæsthetize. With increased tension of the eye-ball, as in glaucoma, a longer time is necessary. Cocaine acts better when the patient keeps the eyes shut, and when used in both eyes. Anæsthesia when the pupil begins to dilate.

Objections to the Use of Cocaine: Reduces intraocular tension; dries and hardens the cornea; predisposes to keratitis; predisposes to secondary hæmorrhage, superficial and intraocular; use as little as is necessary.

Advantages of Cocaine: Convenience; less apt to have loss of vitreous, prolapse of iris and primary hæmorrhage.

Ether or *chloroform* should be used when the eye is so congested that the cocaine will not produce anæsthesia and the patient is intractable.

Objections: Vomiting afterwards may cause prolapse of the iris and even loss of vitreous; superficial *primary hæmorrhage*.

6. ANTISEPSIS: Instruments, except the knife, should be kept in boiling water for one hour; all dipped in alcohol 95 per cent. just before using. Bichloride 1-3000 to skin of lids and to eyelashes; never inside the eye; has been followed by suppuration of the cornea. Mucus removed from the conjunctiva with warm boracic acid. Boiling water dulls the edge of sharp instruments; cleanliness is better than strong, irritating antiseptic solutions. An operator with clean finger nails is usually lucky.

7. SECTION: Peripheral; above.

Corneal Section—Indicated: Large cornea.

Advantages: Less apt to have loss of vitreous or prolapse of the iris; absence of superficial hæmorrhage.

Objections: Removal of lens more difficult and section is bruised more.

Scleral Section—Indicated: Small cornea, large lens and in the operation with iridectomy.

Advantages: Lens more readily removed; section is consequently less bruised; periphery of iris can be removed better.

Objections: Loss of vitreous greater; superficial hæmorrhage; prolapse of iris is more likely to occur(?)

Conjunctival Flap: The section which includes considerable conjunctiva has less danger from secondary infection.

Size of Section: Almost one-half of the corneal circumference; better too large than too small. If the section is too small, the removal of the lens is difficult and produces injurious traumatism to the whole eye; the removal of cortical matter is difficult. Section too small causes: Irido-cyclitis; suppuration of cornea; prolapse of iris, etc. Smooth section heals better. Bruised section causes secondary prolapse of the iris. Slanting section is made with the knife parallel to the plane of the iris.

Advantages: Less apt to have loss of vitreous; healing better; with iridectomy, periphery of iris removed better.

Objections: More difficult to remove the lens.

Steep section is made with the knife held more perpendicular to the cornea; has the advantage that the lens and cortex can be more easily removed.

Objections: Wound gapes; loss of vitreous promoted.

A combination of the slanting and steep section is often made; the slanting section until just before withdrawal of the knife, when the section is finished with the knife cutting perpendicular to the cornea.

How to Prevent Premature Escape of Aqueous: In making the section, always hold the back of the knife gently down until the counterpuncture is made; the back of the knife should be straight. Avoid splitting the cornea; enter the anterior chamber with the knife held perpendicularly to the cornea.

Measures to Avoid Cutting the Iris: Prevent straining

of patient. Pupil not dilated. Prevent premature escape of aqueous. After the counterpuncture is made, while holding the heel of the knife stationary, cut rapidly upwards with the point until the edge of the knife is beyond the margin of the pupil; then cut with the heel of the knife. If the iris falls over the edge of the knife, free it by turning the edge of the knife forwards and manipulate gently, trying to bring the point of the knife up first. No success; finish the section, and if the iris is very much bruised or cut, do an iridectomy.

Section gapes when: Tension of the eyeball is +. Lens swollen. Patient looks down.

When to Stop and Postpone the Operation: Puncture wrong. Escape of aqueous as soon as puncture is made. Counterpuncture difficult; point of knife dulled by making puncture. Unruly patient squeezing during section; section left with a bridge; not completed at the top; wait till the patient is quieted, or use ether or chloroform to finish. (Very unruly patients will squeeze out the whole interior of the eye as soon as the section is completed); lift the speculum from the globe.

8. IRIDECTOMY:

Operation Without Iridectomy: In selected cases results are better than where iridectomy is done. Large corneal section. More difficult to remove lens and debris. Pupil not dilated. Primary prolapse of the iris always occurs; may return spontaneously after closing the eye, or by warm or cool water syringed against the iris, or by use of the spatula.

Operation with Iridectomy: Section more in sclera. Small iridectomy better than large.

Indicated: Cataract complicated with posterior synechia, myopia, choroiditis, etc. Tremulous iris. Difficult expression of lens from rigid pupil or tough capsule. Iris severely wounded during section. Prolapsed iris not easily returned. Lens dislocated before or during extraction(?) Vitreous lost before lens removed. Wound gapes showing decided + tension. Chronic glaucoma. Best results obtained by doing iridectomy months or years before the extraction.

9. FÖRSTER'S OPERATION FOR RIPENING CATARACT:—

Small iridectomy above; scleral opening with lance knife; massage of the lens with a blunt-pointed strabismus hook, by rubbing over the cornea—pressing the cornea well against the lens; lens ripens 1 week to 3 years.

Objections: Vitreous more apt to be lost during extraction. Scoop to extract lens oftener necessary. Patient may lose self-control at the extraction. All have considerable cortex. Tendency to iritis. Results vision not so good.

Förster not indicated: Sclerosed lens; cataract in myopia; soft cataract.

Pooley's Operation for Ripening Cataract without Iridectomy:

Pupil dilated with atropine; corneal section; results worse than Förster. (Perfect results have been obtained, $\frac{2}{3}$, after the lens had been ripened by Förster's and Pooley's operation).

10. LACERATION OF CAPSULE: Can be done with knife before the counterpuncture is made; objectionable. Capsule tough; do iridectomy; lens hard to express and vitreous may be lost. Peripheral capsulotomy (H. Knapp).

Advantages. Prevents prolapse of capsule; less plastic iritis.

Disadvantages: Remnants of cataract shut up in capsule; secondary operations usually necessary; wrinkling of capsule may occur.

Free central laceration of capsule is followed by the best results.

Laceration of posterior capsule after the lens is removed, to obviate secondary operations, is not always successful; danger loss of vitreous.

If there is clear lens substance, puncture lens with cystotome and rotate the lens cautiously on its antero-posterior diameter to separate the lens from the capsule.

Capsule is put on the stretch by slight pressure on the globe.

Cystotome should be sharp.

Avoid dislocating the lens during laceration capsule.

11. REMOVAL OF THE LENS, *Difficult:* When the cyst-

otomy is not sufficient; *lens dislocated*; large lens; small lens; capsule tough; section too small; rigid pupil; posterior synechia; vitreous fluid; unruly patient.

By Pressure: Pressure always gentle and continuous. Begin by pressure with spatula at lower border of cornea, pressing directly *backwards* until the lens appears in the wound; then follow the lens out with gentle pressure of the spatula passing upwards over the cornea. Counterpressure on sclera above the wound is a great help, but it is not usually necessary, and may cause loss of vitreous. If the upper border of the lens becomes lodged behind the section, apply pressure above the wound to cause the lower border of the lens to rotate upwards and be delivered first.

By Scoop Extraction: Always employed when the vitreous is lost before the lens is removed. Always do an iridectomy first. Indicated also when the lens is dislocated considerably; vitreous fluid (?); pressure extraction difficult (?).

12. REMOVAL OF CORTICAL MATTER:

Advantages: Lessens iritis; good vision obtained without secondary operations. Too prolonged efforts to clear the pupil may be followed by bad results—from loss of vitreous, severe iritis, suppuration of the wound, secondary prolapse of the iris.

Methods: Massage of the cornea with the spatula, from periphery to the centre (from above as well as below, etc.), forces cortex into the pupil. Pressure backwards on upper edge of the wound, section gapes and cortical matter flows out when aqueous is present. Close the eye and wait, which allows aqueous to reaccumulate, and massage again when necessary. Close the eye and rub the lids gently over the cornea with a rotatory movement—keep edge of lids away from the wound to prevent infection from eye-lashes. Syringing against the wound with warm boracic acid solution. Instruments in the anterior chamber to remove cortical matter are objectionable, although sometimes of advantage. Pupil black and patient counts fingers; cortical matter generally sufficiently removed.

13. BANDAGE AND DRESSING: Bandage of white flannel

or gauze. Changed twice daily. Bichloride (1 : 3000) dressing; cotton wet with solution. Indicated when patient unruly and objects to dry dressing, and in chronic conjunctivitis, pterygium, dacryocystitis; to prevent infection.

Dr. Chisolm's Dressing: Operated eye only closed with sticking plaster; no dark room; patient not in bed. Has the advantage that healing takes place with slight conjunctivitis and photophobia.—*Bandage* omitted when patient's restlessness is increased by wearing it, and ice cloths used. Bandage causes conjunctivitis, and should be left off after wound is well closed. Too tight bandage keeps the wound open. Bandage especially indicated: Prolapse iris; re-opening of wound; keratitis (?)

14. ACCIDENTS WHEN OPERATING:

If the section is too small; enlarge with scissors.—Avoid pricking skin of nose or lids with the point of the knife.—Vitreous lost, serious. If lost before lens removed: Iridectomy and coop extraction. Lost after lens removed: Close the eye at once and bandage. Not necessary to cut it off.

Causes of Loss of Vitreous: Straining of the patient; pressure too great in expelling the lens; tension +; dislocation of the lens.—Prolapse of iris: Reduced spontaneously, by massage, by syringing, by spatula. Not reduced: Do iridectomy.—Iris cut during section: Iridectomy may be advisable.—Prolapse capsule, difficult to recognize: appearance of gelatinous thread. Danger of infection. Occurs in extraction with or without iridectomy.

Hæmorrhage: Superficial hæmorrhage is caused by wounding iris or conjunctiva. Sudden reduction of tension causes superficial and deep hæmorrhage. Wait after section is made. Bright's, tendency to hæmorrhage. Eye-ball, with tension below normal, favors hæmorrhage. Blood removed from anterior chamber by massage, irrigation, moist cotton against wound, by forceps. Slight superficial hæmorrhage is not dangerous to the eye. Severe superficial hæmorrhage is followed sometimes by suppuration of the cornea, by severe iritis, and by thickening of the capsule.

Deep Hæmorrhage: Preventive: Large doses bromide.

Symptom preceding: Deep seated severe pain. At once give hypodermic of morphine in the temple; vomiting and prolapse of iris may follow a few hours later. Deep hemorrhage may force out vitreous and retina; eye-ball may be lost.

Collapse of the Cornea: Causes: Lack of tone in corneal tissue; patients debilitated. Loss of one-third or more of the vitreous may result in suppuration of the cornea.

Dislocation of the Lens during Extraction: Caused often by a dull cystotome. Push lens back to pupil with cystotome when possible. Try very gentle pressure; if vitreous presents, do iridectomy and scoop extraction.

15. ACCIDENTS DURING HEALING:

Iritis always occurs. It begins early, or after several days, or a week. Pain present or *absent*. Use atropine as soon as the anterior chamber is re-established; hot water by the hour, cathartics, leeches, etc.

Secondary Prolapse of Iris: Occurs at any time, even months after the operation. Pupil is always distorted or displaced in incarceration and in prolapse of the iris. Favored by iritis (swollen iris becomes adherent to the wound); tension of the globe +; tardy union of the wound; restless patient; debris in pupil, blood, cortex; swelling of cornea adjacent to wound; loss of vitreous—iris drawn up behind wound; manipulation of eye; bruising corneal section; straining at stool; debilitated patient—collapse of cornea; bandage too tight—wound opens. Prolapse of iris, after extraction without iridectomy, less dangerous than after extraction with iridectomy. Incarceration and prolapse of the iris during healing has been reduced 24 hours after the extraction and a central circular pupil obtained (Hardy). Iridectomy does not prevent prolapse or incarceration of the iris. Iris in wound is always a channel for infection. Prolapse of the iris may be left alone when there are no symptoms.

Prolapse of Capsule: Wound does not unite. Always remove prolapsed capsule.

Suppuration of the Wound: Very serious. Occurs often without pain. Occurs 12 hours after the operation, and later, even years after.

Causes—not always from outside infection—Nasal catarrh, with and without discharge; chronic conjunctivitis; pterygium; prolapse of the iris; prolapse of the capsule; too strong bichloride eye wash; infection from eye-lashes; debility; alcoholism; restless patient; injury to the eye during sleep; vitreous in the wound; severe hæmorrhage; collapse of the cornea; dacryocystitis; bad sanitary surroundings—foul air.

Prophylaxis: Good results from proper precautions. Treat catarrhal inflammations of eye, nose, and tear passage. Care in cleansing the eye; do conjunctival flap section; wet dressing bichloride cotton changed often, every two hours till wound closed. Pterygium removed before the extraction; or, if not, the section should be made outside the pterygium; bichloride dressing. Prolapsed iris; antiseptic dressing. Debility: quinine, milk punches. Laxatives: fresh air, baths. Alcoholism: do not stop alcohol. Restless patient: do not confine in bed. May have to leave off bandage.

Treatment of Suppuration of the Cornea, sometimes stops the disease and clears the cornea.

Local: Hot water 110°-115° F. by douche to the cornea; very painful, very difficult to carry out, and usually must be done by a physician. Time: at least one hour four times a day. Succeeds. Hot bichloride, galvano cautery, iodoform powder, atropine, pressure bandage, are much less efficient than the constant use of hot water day and night.

General Treatment: Tonics even to apparently robust patients; quinine, feeding, alcohol, etc.—Cystoid cicatrix. Pressure bandage. Iodoform powder dusted on cicatrix.

Glaucoma; Iridectomy:—Panophthalmitis, caused by too early use of the eyes; caused by infection. Enucleation after or before severe inflammation.—Deep hæmorrhage, when preceded by severe pain, may be prevented by hypodermic morphine in temple.—Detachment of retina, also of

choroid, is caused by too rapid operation and by loss of vitreous.—Hypæmia: rest in bed, bandage, hot water, atropine.—Hypopyon: bandage, paracentesis. Hot water is often sufficient to relieve, but must be applied by douche.—Opacity of cornea is caused by too strong cocaine, by strong bichloride, by keratitis.—Reopening of the wound is caused by too tight bandage, movements of restless patient, feeble patient.—Sympathetic ophthalmia; operated eye inflamed or painful for some time; enucleation.—Insanity: some elderly patients become insane from the confinement in bed.

16. TREATMENT DURING HEALING: Ice is indicated when bandage cannot be worn; used as long as agreeable to the patient. Hot water bathing benefits iritis and keratitis, and seems to clear the pupil. Atropine always used and as soon as the anterior chamber is re-established; its use continued until the eye-ball is no longer red. Eserine to prevent prolapse of the iris is of doubtful value. Astringents for conjunctivitis. Leeches to relieve severe pain. Tonics, fresh air are generally useful. Stout patients need tonics. Full diet as soon as patient can take exercise.

17. SECONDARY OPERATIONS: Needling may cause purulent iridophakitis, cyclitis; early before capsule is thickened; two needles to prevent traction; one may be pushed through the ciliary region behind the membrane.—Iridotomy when the capsule is thickened or adherent to the iris. Keratome for incision through the cornea and capsule. De Wecker's scissors to divide capsule and iris—avoid rubbing the inner surface of the cornea with the scissors. Atropine before and after the operation.—Iridectomy rarely does harm.

In conclusion, I wish to express my obligation to Dr. H. D. Noyes for many valuable practical suggestions.

131 West 56th St.

ART. II.—Puerperal Fever.—Its Prevention and Treatment.

By **R. H. GARTHRIGHT, M. D.**, of Vinton, Va.

If the accoucheur will exercise rigid antisepsis in the treatment of his patients, he will rarely be called on to treat a case of puerperal septicæmia. During the past year I had two alarming cases of this disease to manage. I am satisfied that they were caused, in part, by neglect of thorough antiseptic measures. If those who ridicule the antiseptic treatment of puerperal women in private practice will observe closely, they are bound to conclude that, in the long run, it is important to adhere to its use. For years we may practice the old methods with success, and when we least expect it, get hold of a fatal case of puerperal fever.

If the methods of Dr. Joseph Price or Dr. Garrigues were observed in every case of midwifery, deaths from puerperal infection would, beyond a doubt, be greatly lessened. The most successful obstetricians of the day agree that perfect cleanliness of the parturient canal, from the time the pains of labor begin till the convalescence of the woman, is of vital importance.

Dr. T. Gaillard Thomas observes, "That plan is the best which accomplishes most perfectly the cleansing of the parturient canal."

Dr. Joseph Price says, "The ante- and post-partum douche should never be omitted; the importance of douching the vagina and cleansing the mucous canal is as vital as cleansing the examining finger and hand. It operates not alone to save life and to promote the comfort of the mother, but serves yet another important function—it saves the eyes of the infant. As a douche, mercury is the most reliable, energetic and least dangerous. We have numerous cases reported with a history of filthy discharges, bad odor antedating labor, followed by alarming symptoms and death. In this great group of cases, had a careful ante-partum toilet been made, bad symptoms would not have followed one of the most trying of instrumental interferences. It is exceptional to have bad symptoms following any of the serious accidents incident to parturition, where

the simplest and easiest of precautions have been scrupulously exercised."

Dr. J. C. Reeve, of Dayton, Ohio, in an article on antiseptic midwifery (*Amer. Gynæcol. Jour.*, August, 1891), says, "Antiseptic measures should be rigidly followed in private obstetrical practice as far as circumstances of the patient and her surroundings render them practicable."

We should look at a woman about to be confined as we look at any case of surgery, for, when she has given birth to her infant she is often found bruised and lacerated. To-day, when we do a surgical operation we first render hands, patient, instruments—everything aseptic. When the woman begins to have labor pains, put the parturient canal in an aseptic condition. Prevention is easier than curing.

If through negligence or otherwise we get on our hands a case of puerperal septicæmia, perhaps there is no treatment superior to the repeated cleansing of the parturient canal with hot bichloride of mercury injections.—keeping up, if possible, the lochial discharges, quinine in full doses during the first stages, in tonic doses later, morphine, turpentine stupes over the abdomen, digitalis as indicated, digestive remedies, stimulants, and a plenty of good nourishing food.

The facts pointed out may be the better impressed by the reports of cases appended:

CASE I.—January, 1892, Mrs. C. had a normal labor. The birth was accomplished within five hours after the pains commenced. No antiseptics were used, but cleanliness was scrupulously observed by the physician in attendance. She did well until the third day, when she had a violent chill, which was followed by high fever—the temperature going up to $105\frac{1}{2}$. Gave her a large dose of calomel, one drop tincture aconite root every hour, and kept her cinchonised and morphinised for three days, after which time the aconite was abandoned and the morphia and quinine continued. One of the first measures used after the initial chill was to give, with a fountain syringe, one gallon of 1 to 3000 bi-chloride of mercury solution as hot as could be borne. These injections were repeated three or four times a day for a week. The temperature would fall several de-

grees after each injection. This lady was robust and healthy, and after a hard fight with the last enemy she came out victor. Good, digestible food was used from the beginning, and fortunately there was but little bowel and stomach disturbance.

CASE II.—Called December, 1892, to attend Mrs. F., in her fifth confinement. In about half an hour after I reached her bed-side the birth was completed. I scrubbed my hands and arms to the elbows with hot water and soap, then soaked them in a strong bichloride of mercury solution, and introduced two fingers into the vagina to ascertain the presentation. When the baby had been expelled, I made gentle traction on the cord and expressed the placenta by the Creedé method, gave ergot, washed my hands, dipped them in the bichloride solution, and swept out the clots of blood in the vagina. Put clean garments on the patient, changed sheets and applied bichloride napkins to vulva. These were ordered to be changed frequently. Twenty-four hours after the birth she complained of a fullness in the vagina. Under antiseptic precaution, I introduced my hand and swept out several large clots of blood. Ordered 1:3000 bichloride of mercury solution to be injected repeatedly. The following morning she seemed comfortable, but late in the afternoon a chill attacked her and all the symptoms of child-bed fever quickly developed.

On close inquiry I ascertained that my orders regarding the injections had been ignored. Expressed myself in the plainest language, and directions subsequently were observed to the letter. Treated her with quinine—ten grains every three hours—morphine, the bichloride injection, turpentine stupes, digitalis as indicated, milk, animal broths, and preparation of pepsin for digestion. She recovered. I was assisted in the treatment of this case by Drs. B. D. Downey and R. W. Fry, of Roanoke.

An important lesson, which I hope never to forget, was impressed upon me by this case, viz: Never entrust to others important matters which I should attend to myself. Had I given the douche myself when I removed the coagulated blood from the vagina, and cleansed that canal of impurities, it is probable the fever would not have supervened.

When my patient was convalescent, I was called to see her little girl—three years of age. As the case is interesting,

and due to contagion from the mother, I will briefly describe it.

Some ten days prior to her mother's confinement, this little girl fell on a stove and burnt her wrist. While the mother was ill this child got in the bed under the cover, and remained there an hour or two every day. The puerperal poison was absorbed through the wound, and the child barely escaped with her life. The arm to the shoulder was inflamed and terribly distended. Her fever was high; all of her symptoms resembling those of her mother.

ART. III.—Appendicitis—Object Lessons in Abdominal Surgery from the Operating Table of Drs. Joseph and Mordecai Price.

By H. H. LINK, M. D., of Petersburg, Ind.

CASE I.—In practice of Dr. Joseph Price.

Miss T., aged seventeen, had suffered from recurring attacks of acute, agonizing pain ever since she was eleven years old. Last July, while in the Adirondacks, she suffered two attacks, and called in a skillful physician, who at once recognized the nature of the trouble and advised the prompt removal of the appendix. She returned home an invalid, and placed herself under the care of her family physician, Dr. John H. Musser, a very able man and an especially accurate diagnostician, who advised absolute rest and a carefully regulated diet.

Notwithstanding the enforcement of absolute rest in bed and the resort to many wise palliative measures, in the very midst of the treatment another attack occurred, of such severity that the use of ether was required to relieve the fearful pain from which she suffered. By this time she was quite noticeably emaciated.

There was always some tenderness and pain to be elicited on very slight pressure over the region of the appendix, but at no time could anything more than muscular resistance be discovered by the most careful palpation. Dr. Musser now urged a resort to surgery, and the patient and her friends having given their consent, Dr. Joseph Price was asked to see her and perform the operation.

The history shows that the mother, in order to relieve the pain from which her daughter so often suffered, had been

in the habit of applying hot fomentations and giving the young lady large doses of oil. This usually brought relief as soon as free purgation was established. When the pain left her she was always able to attend to her daily employments, and appeared in her ordinary health until another attack seized her.

Some of these paroxysms having made their presence felt at or near a menstrual molimen, there was a marked simulation of dysmenorrhœa. For this reason it was decided to open the abdomen by the median incision in order that the appendages might be examined, and that any adhesions of small bowels or omentum might be released.

Upon opening the abdomen, the tubes and ovaries being found normal, were not disturbed. The vermiform appendix was three and one-half inches long, tightly constricted, though not completely occluded, at its junction with the cæcum. Ulceration was not found at any point, but it was markedly distended with pus. There was no leakage at any point, and the investing peritoneum was but slightly inflamed. Adhesions were noticeable only by their absence. The appendix, having been identified and delivered by the two fingers alone, was transfixed at the base of its mesentery with a double silk ligature, tied off with a figure of eight knot, and cut away. The stump was then cleaned out with a strip of iodoform gauze wrapped around the point of a hæmostatic forceps, and the top of the stump was covered in with a Lembert suture. After being dusted with iodoform, the stump was dropped in the belly and the abdomen closed without irrigation or drainage and the patient put to bed.

Had the operation been delayed but a short time longer, everything indicated that a slough would have taken place at the point of constriction. Had this happened, a localized peritonitis would have followed, with resulting adhesions fixing the omentum and small bowel. At such a stage of the disease the McBurney point would have responded to pressure, as it is in all probability due to adhesions, wherein we have a solution of the theory as to its mechanical nature. Had rupture been a sequence, and had nature been unable to immediately shut off the general peritoneal cavity by conservative adhesions from the pus pouring out of the dis-

tended organ, speedy death from an acute angry general peritonitis would have been her immediate fate.

The history of this case, and the condition found on section, furnish some interesting questions for discussion.

Why did she suffer pain so long? Why did she get relief by the simple purgative measures instituted in a domestic course of treatment? Why did her pain gradually increase in frequency, persistency, and severity, and finally cease to yield to palliative measures?

There was only a partial occlusion at the base of the appendix. This narrowing of its calibre or lumen was progressive in character, and subject to sudden increase in extent, from swelling of mucous membrane by reason of acute indigestion or from a mild attack of gastro-intestinal catarrh from any transient cause. When this swelling, with its resulting occlusion, took place, the offending organ became at once a retention sack. Secretion being at the same time increased, great distention promptly ensued. Pain was the result of pressure. A purgative, by increasing the peristalsis of the bowel, relieved the distention by emptying the contents of the appendix into the cæcum. The gradually increasing degree of the constriction rendered this process more difficult and uncertain at each recurrence of the condition. So long as the opening in the entrance to the appendix remained fairly patulous, and so long as complete stricture only took place from swollen mucous membrane, just so long could she be symptomatically cured by the administration of drugs and a regulation of the diet and exercise. This inflammation or this appendicitis, although catarrhal at first, had a tendency to increase in severity and change in character at the point or points of greatest irritation, which was naturally at the point of constriction, or at the neck of this retention sack. At this point, connective tissue—the result of inflammatory deposit—was formed, and in contracting (which is the natural history of connective tissue, due to inflammatory exudate), the lumen of the appendix was finally closed. Retention and accumulation still continuing, strangulation and slough-

ing were the next steps in the pathological process to be expected. At this point, medicine was powerless, and surgery alone was able to prevent a catastrophe.

This case beautifully illustrates the method by which a cure is brought about by medical treatment, and explains how it is that the same patient is often reported as a cure by some half dozen or more medical men, each as honest as he is sanguine. She had been, at different times, under the care of different physicians. Each symptomatically cured her; and, having no opportunity to follow up the case, naturally inferred that the cure was a radical one. If each reported the case, it would go in as a complete cure of appendicitis by medicine, and be set down as an argument against surgery; whereas, the case, taken as a whole, is a most beautiful argument in favor of surgical interference, and early interference at that. Had she not fallen into the hands of a physician whose varied knowledge and extensive experience have long ago taught him that medical treatment has its limits, and that conditions constantly repeat themselves wherein medicine becomes the handmaid of surgery, the attempts to relieve her by treatment might have continued till a slough occurred, and the flames of a raging peritonitis would have closed her career.

Such cases as these go to show that no man can know that he has cured an appendicitis because the symptoms subside. It may recur at any time. If there is a small faecal concretion or other foreign body in the appendix, and an increased peristalsis causes its regurgitation into the bowel, the symptoms will, of course, promptly disappear, and the patient will remain well until he meets with another accident of similar character. But no matter how great the relief obtained from the judicious administration of remedies, the enforcement of rest, and the regulation of diet, we cannot know how long the patient will remain out of our hands.

This case certainly teaches that the best time for surgical interference is just as soon as a diagnosis is made. If ope-

ration is postponed, then a very good time for surgery is between two attacks, or in the stage of quiescence. If we operate early, adhesions are either absent or not formidable, and can be easily disposed of. Then pus either exists in small quantities, or is circumscribed by limiting walls forming a sack or pocket that may be quite easily and thoroughly irrigated and drained. Early surgery finds the patient in good condition—neither enfeebled nor spiritless from long-continued suffering, nor emaciated from pus absorption and recurrent anorexia. Then the operation approaches nearest to a simple section, with the general peritoneum free from infection. By promptness, we avoid the danger of normal structures, such as bowel and omentum becoming cheesy and friable from long contact with a pus sack. One side or more of a circumscribed abscess is not unfrequently formed by these structures; when they have been thus bathed, for an indefinite period, in foul pus, they become friable; and when an operation is done, either a resection of the ileum must be made, or we have a faecal fistula at the head of the colon.

An early section not only gives the patient a far better chance of recovery, but restores him to health without loss of time, and spares him the pain and discomfort of prolonged invalidism. It matters not how completely a collection of pus is walled up, there is constant absorption taking place. The general health becomes much impaired, and the functions of digestion, assimilation and excretion are especially weakened. Thus, vital chemistry is, to a great extent, suspended, and the vital forces of the patient all feeling the general depression, surgery is more likely to come to him simply as a forlorn hope, in which the forlorn is far in excess of the element of hope.

If an operation is done while the patient is in good condition, before absorption of toxic products takes place, and while the local trouble is comparatively in its incipiency, all will recover. Waiting for an angry peritonitis, general or localized, in the light of our present accurate surgi-

cal knowledge, and the magnificent results of the best operators, who have a right to speak as authorities, is certainly anything but commendable, from the standpoint of conservative surgery. Operating on dying patients for anything will always be attended by a frightful mortality, and in this way destroy the confidence of both the people and the general practitioner, who is usually the family physician.

CASE II.—In the practice of Dr. M. Price.

Boy, 13 years old, son of a prominent physician of Pemberton, N. J. Attacked with sudden and severe pain in the region of the appendix. Apart from the pain, symptoms mild at first. Diagnosis not positive. By the end of the week, tumefaction on deep pressure could be readily made out. His temperature had gone up to 103° , and steadily remained at that point. At this time all doubts as to the condition having been set at rest, it was at once decided to operate.

The diagnosis being positive and no bowel obstruction existing to be disposed of, an incision in the right linea semilunaris was decided upon. After opening the abdomen, a finger was introduced, and immediately came upon the appendix. It was turned down beneath the head of the colon, and about an ounce of pus was pocketed between it and the colon. This pocket was opened up, and the pocket, together with the general peritoneal cavity, was carefully irrigated. After irrigation, the wound was stuffed with iodoform gauze, placed carefully around and in the abscess pocket. Patient was put to bed, and convalescence took place with complete abeyance of symptoms from the start.

In this operation no attempt was made to remove the appendix, for the reason that a much larger incision would have been necessary, and great violence would have been done the bowel in dragging up the head of the colon. It was not thought that any better result would follow, even if the extensive manipulation did not materially add to the gravity of the surgery. By irrigating, all septic matter was washed away, and by leaving the wound open and stuffing with gauze, any tendency to re-accumulation was disposed of by directing the line of least resistance outward.

Left behind, the appendix was to be disposed of by nature, either by sloughing, healing or atrophy. Any morbid products thrown off in either of these processes would be taken care of by the drainage. By stuffing the abscess pocket with gauze, healing by granulation would take place from the bottom, and the patient be left in as good condition as if more radical measures had been resorted to in dealing with the offending organ.

There are some reflections to be made on this case as to what it teaches in the way of diagnosis. Any pain coming on suddenly and felt in the right iliac region is to be suspected as an appendicitis. If there is tumefaction and hardness at or before the onset of pain and fever, it is most likely to be simple impaction or accumulation of feces at or near the head of the colon. If tumor is absent at first, and the fever runs higher as time passes, and tumefaction deep seated comes on gradually, the fever pains and the tenderness keeping step with it, we may almost unhesitatingly pronounce in favor of an inflammation at the head of the colon or an appendicitis. With this condition, an early resort to surgery will give the most gratifying results, and no further delay is permissible if the welfare of the patient is to be considered. Whether or not the appendix should be removed will depend upon the conditions found. If adhesions are not plentiful nor strong; if the head of the colon can be brought in sight with but little violence; if the appendix itself can be readily found—by all means let it be removed. But if opposite conditions obtain, then the interests of the patient are best subserved by simple irrigation, gauze packing and drainage, leaving an open wound to close by granulation.

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ART. IV.—Cerebral Hæmorrhage in Children.*

By CLIFTON MAYFIELD, M. D., of Washington, D. C.,

While cerebral hæmorrhage in children is not to-day considered the rare occurrence that it formerly was, when nearly all cases of spastic paralysis were believed to be of spinal origin, it is still looked upon as a less frequent happening than my own investigations would lead me to believe it to be. The reparative powers of childhood are great, and the mortality attending paralysis of supposed cerebral origin is lower by far than in adult life; autopsies are less numerous, and a certain determination of the lesion frequently impossible.

For this reason, the pathological condition—poliencephalitis—described by Strümpell as the cause of spastic palsy, must be accepted only with caution as the true explanation.

Dr. Sarah J. McNutt, whose investigations on the subject of infantile cerebral hæmorrhage have been very thorough, does not look with much favor upon Strümpell's theory. Strümpell says, "In old necropsies, one finds scars in the motor areas of the brain, which are not congenital atrophies, and which certainly resulted from acute inflammation of the gray matter." He believes that a parallel may be drawn between the cerebral form and the well-recognized inflammation of the anterior gray comma of the cord—poliomyelitis.

While in all probability such acute changes may at times take place, his explanation is as yet only a theory, and we are forced to return the verdict "not proven."

H. C. Wood believes in the frequency of cerebral hæmorrhage as the cause of spastic palsy. In a clinical lecture, recorded in the *Polyclinic*, Vol. IV, he speaks of all of these cases of spastic paralysis as nothing more than the representatives of ordinary paralysis from brain clot in the adult,

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, held April 10th, 1893.

the symptoms being peculiar in children because the muscles are not mature, and are therefore more subject to rigidities and contractures.

Intra-cranial hæmorrhage may be meningeal or intra-cerebral; in the majority of the cases, the former. In the meningeal form, the extravasation is usually into the arachnoid cavity, but it may be beneath or into the meshes of the pia mater, or even between the dura and the bone. In the intra-cerebral form, it appears in adults as a gross lesion of the brain substance—a cavity containing a clot—a form that Abercrombie believes is very rare, or as capillary hæmorrhage within a more or less limited area.

Cerebral palsies occur with greatest frequency after first and difficult labors. Gowers found that in twenty-six cases of this affection the child was first born in sixteen, and in six of the others the head was the last part delivered. The undue pressure to which the head is subjected in these cases is the direct agent in the production of the hæmorrhage; and delayed establishment of respiration, and compression of the cord, by increasing cerebral congestion, add greatly to the danger of its occurrence. In such cases, the extravasation is almost invariably meningeal—at the base in many head presentations, and at the convexity in breech cases. Trauma is a rare cause; much more frequently it occurs as a result of the congestion accompanying heart disease, severe straining, and attacks of whooping cough. Hæmorrhage occurring after birth is most frequently a complication or the sequelæ of the eruptive or contagious disease; but the reason of its occurrence is not yet understood, unless it may be, as explained by Steiner, the result of fatty degeneration of the walls of the blood vessels. Miliary aneurisms, syphilitic degeneration of the arteries, and capillaries, purpura and tubercular masses compressing the various sinuses, are possible causes.

The symptoms of hæmorrhage occurring at birth may be but slightly pronounced, or there may be no symptoms noted for days, or even months. Indeed, in many cases, it is only when the child should sit up that one's attention is

first called to the rigidity of the legs and spasmodic movements of the arms. In other cases, the paralysis may be at once observed; convulsions and rigidity are soon added, with or without coma, the presence of these latter depending upon the extent of the lesions.

In hæmorrhage occurring after birth, the initial symptoms are ordinarily more acute. Sudden loss of consciousness, with convulsions, rigidity, and elevation of temperature, mark the onset. In both, palsies occurring at birth and those that come on later, the secondary symptoms will depend largely upon the seat and extent of the extravasation. The paralysis may be a hemiplegia, paraplegia, or deplegia. R. W. Lovett found, in sixty cases of motor disturbance of cerebral origin, twenty-six cases of hemiplegia, and two-thirds of these were of the adult type. In the remaining third, there was spastic paralysis of the other leg as well. In sixteen of the sixty cases, there existed spastic paralysis of the legs alone, or of the legs with some involvement of the arms.

Aphasia may be present in older children, and the younger ones may be slow in learning to talk. Squint is frequent, and mental defect very common. Facial paralysis is usually not present. Increased tendon reflexes and contractures of paralyzed parts are almost invariably present. Usually retarded growth of the affected limbs is a result, giving rise to apparent though not real atrophy, for the muscles waste but little. The contractures that exist are usually of the muscles of flexion and adduction, especially the latter. Disturbances of motion are common, usually athetoid, but choreiform, ataxic, or associated movements are frequent.

In meningeal hæmorrhage, the apparently sound side will usually be found to be at least slightly involved. Of the two cases that I desire to record this evening, the first appears to me to be very typical, but, unfortunately, though death ensued, an autopsy could not be obtained to verify the diagnosis.

By those of you who accept Strümpell's teaching, my second case may, perhaps, be classed as one of poliencephalitis.

CASE I.—The child was born after only three hours of labor, the second stage lasting but one hour. The mother, a primipara with excellent personal and family history, had a roomy pelvis, and the passage of the head through that canal was easy, the uterine contractures not extraordinarily strong, and the suffering of the mother was but moderate. In utero, the child was unusually vigorous, especially during the beginning of the second stage of labor. Though delivery of the head was effected without the usual advance and recession of the presenting part, when it begins to distend the perineum, there was not the slightest tear.

The infant, a well-formed child of about seven pounds, was asphyxiated, a matter of surprise to me, considering the rapidity of the labor. Nothing unusual was noted beyond this.

During the following twenty-four hours, the child cried frequently, with a short, sharp, spasmodic cry, and vomited a number of times. During the second day, the vomiting did not recur, but the crying continued; and when she was placed to the breast, she did not close the lips about the nipple, nor attempt to nurse. Fluids dropped into the mouth would, however, be swallowed quite readily. The bowels and bladder both acted about thirty-six hours after birth. Some time during the afternoon of the second day, right hemiplegia was first detected. The right eyelid was not raised at all, and the entire right side of the face was more of a blank than is usual, even in infants, and showed in marked contrast with the opposite side. There was flexed contraction of the arm and leg; the thumb was incurved, and the foot was strongly flexed upon the leg. There was also moderate rigidity and flexion of the left arm and leg.

The right pupil was widely dilated, and did not react to light. Tickling the soles of the feet produced reflex contractions. Within a few hours, convulsions supervened.

They always began upon the right side and extended to the left, and were preceded by spasmodic breathing and crying. The left eye and the head would turn to the left. Between the attacks of spasm, the child lay comatose.

The convulsions became more frequent during the next thirty-six hours, but lessened slightly in force during the last day. Coma became deeper; the breathing was more

spasmodic, and at times typically Cheyne-Stokes in character. There was evidence of glottic spasm with crowing respiration. Death ensued near the end of the fourth day.

During life, the fontanelles were so tense as not to be outlined accurately, but after death they were found to be much larger than normal, the anterior being larger than a silver half dollar. All of the sutures of the convexity were widely open, the frontal being more than a quarter of an inch wide at the upper part of the forehead.

It is possible that this separation might have been the result of the expanding force of the serous effusion, for there was undoubtedly a co-existing lepto-meningitis; but considering the acuteness of the case, it does not appear to me probable that such separation would have taken place. I am therefore inclined to look upon it as a result of delayed bone development; the extreme compressibility of the head being thus, at the same time, the explanation of both the easy labor and the hæmorrhage.

CASE II.—The patient is a girl two years of age. The mother was hysterical before marriage, but during and since utero-gestation with this child, has been in good health. There is some family history of tuberculosis. The father's history is good except as regards his frequent and excessive use of stimulants. This child was the second born; and though the presentation was a breech, the labor was easy, the second stage lasting but half an hour, and the head was readily delivered by moderate traction upon the body. There was slight delay in the establishment of respiration.

When but two weeks old, the child had an attack of measles, but unmarked by symptoms of any severity.

From this time until the child was five months of age, I did not see her, but the mother assures me that she appeared to be in good health. At this time, it was observed that she could not hold up her head like other children of her age, and that she did not move the left leg and arm to any extent. There was moderate flexion and strong adduction of the left leg—very slight adduction of the right. There was rigidity of both arms, but not marked on the right. The hands were constantly clinched, and the head drawn to the right side and forward on the chest. There was not, at any time, loss of consciousness, convulsions, nor squint, nor any facial paralysis. If the hæmorrhage occurred during the attack of measles, elevation of tempera-

ture would naturally have aroused no suspicion of additional trouble.

At the present time, the child cannot walk, though, when held up, she will make an attempt, with resulting crossed progression, due to the decided adduction of the left leg; all of her weight, when she attempts to stand by holding to a chair, is borne on the right foot. The feet are always in extension; the spine curves under the body weight; and the movements of both hands and arms, especially of the left side, are ataxic. The muscles of the arms and legs lack development, but are not wasted or flabby; and the tendon reflexes are exaggerated. Sensation seems to be normal; and the functions of the bladder and bowel are not impaired. There is some slight difficulty in swallowing solids. Nasal catarrh has been present almost from birth, and she has had several attacks of bronchitis. She is, perhaps, slightly tardy in learning to talk, but her monosyllabic speech is correct and clearly enunciated, and in all respects she appears to be as bright as other children of her age. There is no asymmetry of the skull observable by ordinary methods.

While there was, at no time, such evidence of acute onset as in the first case, I nevertheless think that the symptoms warrant a diagnosis of meningeal hæmorrhage of moderate extent over the convexity. The decided improvement that has taken place during the past year gives me just cause for a favorable prognosis as regards physical and intellectual growth. However, she may yet have fall upon her the curse of epilepsy with partial idiocy.

When the legs suffer more than the arms, it is frequently a matter of difficulty to differentiate between meningeal extravasation and spastic spinal paralysis. In the latter, the onset is usually more definite; the movements of the hands are not ataxic or athetoid; the child has been perhaps able to walk, and has lost the power; the tendon reflexes are not affected or are lessened; the affected limbs are blue and colder than normal; and the palsy is soon followed by marked muscular atrophy with loss of re-action to electrical stimulation.

In multiple cerebro-spinal sclerosis, the symptoms are usually of an insidious nature, but, even when more acute,

the sensory disturbances, with muscular weakness and tremor, that precede the paralysis, ought to make clear the diagnosis.

Embolism and thrombosis give rise to difficulties in diagnosis, the greatness of which can be appreciated when we find good authorities who look upon the one or the other of these conditions as being the principal factor in the production of cerebral palsies.

Thrombosis is usually the result of syphilis or scrofula; the onset is gradual, unattended by loss of consciousness, and is usually preceded by headache, dizziness, and muscular twitchings; and the paralysis is slow to disappear.

Embolism may be suspected when there is heart disease; when the paralysis is progressive; when coma, if present, is of very short duration, and more especially when the paralysis is limited to a single muscle or group of muscles.

The prognosis in cases where the coma or convulsions are marked and long-continued, as in my first case, is of the gravest.

When not of this severe type, life is usually prolonged; but until later years, little can be foretold of the resulting mental or motor disturbance.

In cases occurring months or years after birth, prolonged coma and convulsions must give rise to serious apprehension of fatal results. Indeed, Gowers says of all these cases that of those that recover but few have been ushered in by convulsions; for when the lesion is severe enough to produce them, recovery does not follow.

In these milder cases, complete recovery but seldom occurs—there nearly always remaining some rigidity and contracture.

As far as *preventive treatment* is concerned, the indications are very plain. Prevent injury to the meninges by avoidance of prolonged pressure upon the head of the child during labor. Pressure by forceps, in capable hands, is likely to do less injury to the head than will follow its prolonged compression in the pelvis, especially in breech cases. Likewise avoid, as far as possible, cerebral congestion, the result

of compression of the cord or too long delay in establishing respiration.

In the attack, the convulsions add greatly to the danger by augmenting the already existing congestion, thereby increasing the hæmorrhage. To control the spasms, chloroform is indicated as the most efficient agent; or, in its stead, chloral may be given. During this time, but more especially after the subsidence of the convulsions, the bromides in full doses are of service in preventing a recurrence.

Thorough evacuation of the bowels and absolute quiet, with counter-irritants to the limbs, cups or leeches to the neck, and cold continuously applied to the head, comprise about all the remedial agents at our command that will prove of service during the acute onset.

In the after-coming stage of palsy, attention must be given to the general health. Cod-liver oil and tonics, with laxatives when necessary, are all that will be needed in drugs, except when syphilitic treatment is indicated. Electricity, massage, and rhythmical gymnastic exercise will often work wonders in restoring tone to the affected limbs. When the contractures are marked, some form of mechanical appliance will be necessary to place the limb in a position to make its use possible. Mental defect must not be overlooked, lest efforts to force a mind, not equal to the tasks put upon it, may retard, rather than hasten, intellectual development.

As I have already said, the most that can be ordinarily expected is a partial, and not a complete, restoration to health.

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ART. V.—Summary of Electro-Therapeutic Work in a Private Hospital.*

By G. BETTON MASSEY, M. D., of Philadelphia, Pa.

The recent growth of private hospitals devoted to abdominal surgery and other operative procedures, deserves attention as indicative of an increased appreciation on the part of the profession of the responsibilities of its work. These numerous institutions have risen in response to a real need. The conscientious surgeon is no longer content to subject his patient and reputation to results necessarily attending operations in offices, private houses, hotels, and public hospitals, the latter primarily intended for the alleviation of the poor. A refinement of technique that would ensure the best results required the creation of a machine adapted to the highest quality of work. It is not a little surprising that this most ordinary provision of a proper means for effective work in relieving and curing human suffering should have been so long neglected by the medical profession, while the meanest trades that minister to the wants and vanities of the race have been housed in light and airy apartments, specially arranged for their proper and convenient prosecution.

The private hospitals for major operations have come and have justified themselves. An extension of this sensible idea now presses upon the profession. If major surgery and the surgery of last resort needs this environment for its success, why should we neglect to supply analogous armaments to the work of curing diseases by conservative means?

There is in fact a double reason for such establishments, for the re-enforcement and enlargement of our power to actually cure diseased organs not only leads to greater success in such high work, but lessens also our need to resort to the cruder methods of amputation and removal of parts of the human body yet capable of restoration to health.

* Read before the Philadelphia County Medical Society April 20, 1893.

An establishment thus devoted to the highest development of the possibilities of electricity and allied agencies in medicine and surgery has, therefore, a reason for being in the mere fact that to be well equipped is an important part of the battle in any special line of medical study and art. It has also a reason for existence, more peculiar to itself, in the fact that the principal remedy in its equipment is itself in a transition state, and yet but imperfectly understood. To understand and apply in the most successful manner what is already known of the remedy requires technical knowledge of no mean extent, costly apparatus, and particular facilities; and when the extension of our knowledge of the agent is also considered, the value of enlarged facilities is even more evident. It is true that many of the uses of electricity in medicine may be prescribed and applied by a physician without an extensive knowledge of the agent, just as he prescribes a ready-made pill, but the highest possibilities of the advancement of therapeutic knowledge in this day are as impossible as that a mere user of telephone could have done Edison's work.

It was such considerations that determined the establishment of a private hospital for the development of electrotherapeutics in this city, and the cordial co-operation in the work by many members of the profession has already enabled me to present a brief summary of the results accomplished.

A variety of cases have been under treatment, in the majority of which electricity has formed the principal therapeutic agent, though a not inconsiderable number have received electrical applications as a secondary part of the treatment, rest, massage, regulated exercise and internal medication being associated with them.

FIBROID TUMORS OF THE UTERUS.—Twenty cases of *myofibromata of the uterus* were admitted, presenting many variations of the affection. Of the twenty cases, fifteen were of the ordinary solid varieties, to which the Apostoli method is now generally regarded as applicable. The results attained in these fifteen cases of solid interstitial and sub-

peritoneal growths were as follows: No further growth occurred in any, and a complete symptomatic cure was obtained in each. Of these fifteen tumors thus symptomatically cured, two were also anatomically cured, the growths disappearing entirely in each; ten were greatly reduced in size; two slightly reduced in size, both being still under treatment; and one was not affected as to size.

The five remaining cases were all intra-uterine growths, two being solid polypi with small pedicles. The latter were brought into the vagina by the use of Faradic currents and ergot, and removed by torsion and division, after which the cavity of the uterus was treated by intra-uterine galvanic currents to prevent a possible re-growth.

Three cases were *cystic intra uterine growths* of the most formidable kind described. It is well known at present that cystic growths, as a rule, are not amenable to electricity, and after attempting relief by external methods in one of these, a lack of success caused me to refer it to a surgeon.

The second intra-uterine cystic growth, forming a tumor as large as an adult head, having been referred to me by a prominent surgeon, was treated on the intra-uterine method with unfortunate results, owing to a failure to maintain asepsis. Death occurred from septicæmia two weeks after admission into the private hospital, as elsewhere reported, the sepsis having been received during office practice.

The third intra-uterine cystic tumor, and the final one of this list, was almost an exact counterpart of this fatal case, though the spongy intra-uterine mass was vascular. This lady was sent to me by a surgeon, who recognized the difficulties attending hysterectomy with a widely dilated cervix, even if she had consented to the operation. After mature deliberation and attempts to enucleate piecemeal, which were desisted from owing to frightful hæmorrhage, I decided to apply strong necrosing currents from 400 to 600 ma. directly to the presenting portions of the mass at the external and internal os, being convinced of my ability to maintain a reasonably aseptic condition by continuous irrigation—a suggestion which I owe to Dr. Slocum. These currents,

applied after the bipolar methods, practically dissolve tissues in the immediate path of the current and produce a coagulated condition of living tissue at the periphery of the destroyed path that in itself is a bar to septic absorption for a time. Under this treatment the whole tumor was gradually removed without a drop of blood, as a rule, and at the present time the uterus is almost normal in size.

Reserving an opinion on the future of electricity, in cystic growths of the uterus, it will be seen that these statistics do even more than corroborate Apostoli's claims, for at least two of the cured cases disappeared completely by absorption.

CHRONIC METRITIS.—In spite of the prevalent impression that chronic catarrhal metritis is a rare disease, and relatively unimportant as compared with inflammatory conditions of the appendages, eight cases admitted into the institution were diagnosed as suffering primarily from this affection. In seven of these the diagnosis was corroborated by the therapeutic evidence of relief of symptoms and restoration of health after cure of the local disease of the uterus. Each of these cases of cured metritis, and one case not relieved, with a single exception, showed a general impairment of the health amounting in some cases to pronounced nervous prostration, and in the treatment employed the disturbance of the nervous system received ample recognition. Mere office treatment with electricity would doubtless have been unavailing in such cases. The nervous symptoms demanded their share of attention; yet had not a gynæcological electrical treatment been associated with the rest, massage, and general electricity, a failure to relieve would have been equally certain. This class of cases is a continual reminder of the need of the practical association on a gynæcological and neurological training in the worker of the disease of women. The physical and the nervous woman are conjoined by nature in both health and disease, and no mere nosological classification will separate what nature has thus joined together.

Two of these cases were samples of that unfortunately increasing number of women whose relatively normal

ovaries have been removed for what was really uterine disease, and I regret to say that the only instance of failure to attain a practical cure was in one of these. A persistent uterine leucorrhœa had continued in this case two years after removal of both ovaries. The discharge was purulent, and emitted an odor so unusually offensive, though unlike that from carcinoma, that I suspected its origin to be an infected ligature at the uterine end of one of the cut tubes.

NEURASTHENIA, HYSTERIA AND NERVOUS PROSTRATION.—Seventeen cases of the allied affections of neurasthenia, hysteria and nervous prostration were admitted to the institution, and in their treatment electricity was made to take a more important role than is usually given it. Recognizing the self-evident fact that nutritive disorders play an important part in the pathology of these affections, and that in some of them the real affection is an auto-intoxication of the system from imperfect action of the organs of digestion, assimilation and excretion, these organs and their controlling nerve plexuses were subjected to the actions of galvanic currents of an amperage hitherto unused in such methods. The results have proven the great value of this modification of the rest treatment, rendering cases amenable to it that were failures under the severe stress of mere enforced rest, seclusion and massage. Experience has dictated also that the Faradic current usually employed in these cases as a general muscular and sensory stimulant is best replaced by the galvanic current applied with a large flexible pad as active electrode, well soaped to render its labile action agreeable. The surface reaction is far greater than possible in the usual Faradic method, and to this is added a stimulation of deeper structures by direct chemical changes than is possible only with this current.

PERIMETRIC INFLAMMATION.—Two cases of perimetric inflammatory deposits associated with the adhesions of old pelvic peritonitis were admitted and treated mainly by the vagino-abdominal method. The most successful result was attained in the case in which the cataphoretic transmission of potassium iodide through the parts was used in connec-

tion with the current, old adhesions being loosened, and painful cellulitic deposits and enlarged tubes rendered painless and reduced in size. The addition of a resolvent agent so well known as iodine to the absorbent action of the galvanic current cannot be other than extremely valuable in this class of work.

MALIGNANT GROWTHS.—Two cases of sarcoma of the fundus uteri were under treatment for a time, without results that amounted to more than moderate palliation. If electricity has a field of usefulness in carcinoma, it is only when the seat of disease can be more readily reached, as in such cases as cancer of the cervix. An experience gained elsewhere convinces me that the palliative effects of electricity in cancerous conditions of the cervix are very valuable, and that they may even be curative when the disease is still distinctly local.

DESQUAMATIVE ENTERITIS.—Three cases admitted into the institution suffering from prostration and chronic invalidism, supposed to be due to disease of the uterus and ovaries, proved to be instances of desquamative enteritis. One of these had been treated for fifteen years for ovarian disease by one of the most prominent practitioners in the country without the true nature of the disease being suspected, and another had been mistakenly diagnosed and treated for five years. A study and examination of the stools, which is invariably made in obscure cases, revealed the true character of the trouble—a chronic desquamative inflammation of some portion of the intestinal tract, usually the colon. In one of these a pulsating tumor lay in the left hypochondriac region, doubtless consisting of thickened membrane and enlarged glands lying over the abdominal aorta. In another case the pulsation was also manifest, and all the cases were bronzed to a varied degree. One was discharged much improved by a treatment consisting of the nitro-hydrochloric acid, arsenic, external galvanic currents and regulation of the diet, and two cases are improving under treatment of a similar character.

My experience in this affection has convinced me that

many cases remain undiagnosed by physicians who neglect to avail themselves of the signal aid given in obscure chronic diseases by systematic examination of the alvine discharges.

MISCELLANEOUS.—Other cases admitted presented instances of ovaritis, menorrhagia, chlorosis, pernicious anæmia, obstruction of the bowels, meningitis, chorea, multiple neuritis, musculo-spiral spasm, hemiplegia, locomotor ataxia, etc. In some of these excellent results were obtained, but as the number of each was limited, no general deductions from them will be presented at the present time.

212 South Fifteenth Street.

ART. VI.—Belt and Pad, as Applied to the Præcordial Area, Scrobiculus Cordis, Pit of Stomach, in Concussions and Relaxations of the Heart—An Original Study.

By HENRY V. GRAY, M. D., of Roanoke, Va.

Nothing fresh nor new from the crucible of Time; only the findings from drossy smelting.

Emerson has said in his "*Circles*": "Our life is an apprenticeship to the truth, that around every circle another can be drawn; that men cease to interest us when we find their limitations. His talents, enterprises, knowledge, boots not. His attractions of yesterday have been bounded, his shores trodden; nothing more is thought of him."

The past is written, and is rotting like the seed sown to ripen at its true value in the world to come. The present is only our concern.

The writer, as an old practitioner of medicine, has not forgotten the good service of the præcordial area in his many anxious moments in the teasing, fretting, insomnic troubles of the stomach, brain, uterus, etc. However, it is not of these he would speak this moment, but of the *belt and pad in concussions and relaxations of the heart*.

We are getting very near the true therapy of morbid life when we base it upon a well-defined mental and physical

evolution, and not upon the phylactery of unknown and false interpretation. Our aim, then, is to let the mechanism of our science tell us whether we are right.

The heart is an azygous muscle; therefore means not in pairs; single; not mated. We can, by this meaning, more readily understand the different significations given to the heart in prose and poetry. It longeth to be mated—"two hearts that beat as one."

"The heart is, then, a single muscle, situated in the chest obliquely and a little to the left side, resting upon the diaphragm by one of its surfaces, suspended by the base from the great vessels." It is within a serous sac, the pericardium which is attached to the "*central tendon*" of diaphragm. The fibres of the heart differ from other striped muscles, and partake of the nature of both animal and organic life. Has its own unknown stock of energy and life, the ultimum moriens—last to die.

Come along with me a little further, and let the great anatomist (Gray) tell you the composition of these muscular fibres. He tells you "that the structure of heart consists of muscular fibres and of fibrous rings, which serve for their attachment. The bands of muscular fibres are intimately interlaced, and are of two kinds—those belonging to the auricles and those to the ventricles. The fibres of the auricles are in two layers. The fibres of the ventricles are in seven layers." Note well what he says of these layers: "The fibres of the first layer are continuous with those of the seventh, or internal layer; those of the second with the sixth; those of the third with the fifth; whilst those of fourth, or central layer, seem to be single. The fibres of external layer come around the apex of the heart in a spiral whirl, the anterior fibres going posteriorly to enter the apex, and those posteriorly to anterior to enter apex." This apical connection of the fibres of the heart gives the whirl and tilt of heart's apex by wrapping closely and tightly the ventricular layers, thus wringing and squeezing the blood out of ventricles like the wringing of a tight cloth in the tight grip of the hand, thereby giving a projectile

force of great power to drive the blood along the channels and preventing its clotting.

When we couple with this peculiar arrangement of the layers of the heart its nerve connections, then we will begin to appreciate what is meant by concussion and exhaustion of the heart.

"The nerves of the heart are derived from the cardiac plexuses, which are formed partly from the cranial nerves and partly from the sympathetic. They are freely distributed, both on the surface and in the substance of the heart, the separate filaments being furnished with small ganglia." The nerves proceed chiefly from the pneumogastric and the cervical ganglions of the sympathetic. At the exit of pneumogastric nerve from the cranium, it descends along the neck to outside of the carotid artery and internal jugular vein, anastomosing with the spinal, glosso-pharyngeal, great hypoglossal, and great sympathetic nerves, furnishing branches to the pharynx and larynx, and deeper in chest to lungs, heart, œsophagus, and in abdomen to stomach, liver, cœliac and solar plexuses, gall bladder, and duodenum. It has also connection with that important nerve, the accessory. The pneumogastric nerve has great and powerful relationship and functions. It is excitomotory, excito-secretory, and excito-nutrient. One of its branches, the superior laryngeal, is the sensitive nerve of the larynx. The phrenic nerves, the internal respiratory of Bell, arises from the third and fourth cervical nerves, and receives a communicating branch from the fifth, and is distributed particularly to the diaphragm. The phrenic nerves are simply mentioned in this study to emphasize its functions in speaking of the diaphragm.

After the presentation of the above picture, we can feel secure in advancing our ideas as to concussion and relaxation of the heart, and willingly rest the case with the broad intelligence of our profession.

A special *nota bene* was brought to the attention of our readers when we took up the layers of the heart.

If you will take seven (7) strips of paper and interleave

them in order—anterior and posterior layers (first and seventh, etc.)—slightly overlapping the fourth, a central union; then take an ordinary conical top, giving them a spiral twist around apex, you will readily see the object of this arrangement in forcing out the blood contents. On the other hand, place the layers in a rumpled, sidling, partially interlocked relationship, and attempt to tighten them by pulling, and you will find very defective action and relaxation—totally incompetent to perform the necessary experiment. Just so with the heart in many of its troubles and diseases. These layers of the heart must be tightened by nerve force or by mechanical force. Medicine has but feeble action when both nerves and muscles are exhausted or relaxed.

Review, now, what has been said about the nerves of the heart, and you will not wonder why the heart is so frequently troubled. The patient has a lung, bronchial, and laryngeal trouble. He coughs and coughs until he falls back upon his pillow exhausted. The disease has advanced to a point in which nutrition is failing; the heart layers are becoming relaxed; the diaphragm is sagging from weakness of its nerves (phrenic); its central tendon, to which the heart is attached, is losing its force; respiration can no longer be performed; the patient coughs a few more times and dies. Heart failure is at once accused of having been the cause. A patient has a case of violent laryngeal congestion, irritation; the patient coughs, hawks and hawks; sneezing; he becomes dizzy, vertiginous, blind; he suddenly falls back dead. Here is a case of *heart failure* from concussion. See if the connection of the nerves can't account for it. The heart is inhibited by a spasmodic action of nerve cells of the superior laryngeal, pneumogastric, etc.—a forcing together of nerve cells so close and tight that the force cannot any longer act, and the heart ceases to beat; this is concussion—the former is relaxation; yet the two may conjointly act.

Particular stress is here given to concussion and relaxation. Inhibit is to restrain—*nerfs d'arrêt*. Disorders of the

inhibitory nerves—cardiac, respiratory, intestinal, and reflex—are restraint neuroses.

We may naturally look forward to concussion in a great many diseases of an acute nature, based upon a neurotic temperament. It can likewise take place in long continued, wasting diseases, in which relaxation of the heart would be its companion. Certainly we can all understand by the anatomical structure of this organ what is meant by relaxation.

Belt and Pad.—These are the cases requiring mechanical support. Don't wait too long before applying belt and pad. Stimulants, heart tonics, in many of the cases, would be worthless without support. The rule of pugilism is not to strike below the belt. The athlete, roamers, and semi-barbarians wear the belt to enable them to withstand long and fatiguing journeys and the knowledge of the cravings of excessive emptiness and hunger.

In a contribution to the *St. Louis Clinique* by the writer, upon "Bandaging and Position in Tympanites—Intestinal, Peritoneal," an idea may be gathered upon the value of such therapeutic means.

In concussions and relations of the heart, you apply your belt and pad to the pit of stomach and around the waist to compel the downward crowding of nerve cells to an upward expansive outlet, and thus start anew the circulation of the stagnant cells. Again the sagging, relaxed heart feels its support and acknowledges its indebtedness by payment in full, assisted by the friendly touch of its neighbor, the diaphragm.

In conclusion, this study has been entered upon to offer some relief to the rapidly increasing members, who are "crossing over the river" in past few years, by so-called heart failure. The writer, who is an acute and anxious sufferer from such troubles, has found great relief in applying belt and pad, which should be worn with ease and comfort, or not at all. No one would hardly apply such means to the plethoras of disease or in the sthenic forms—these require quick and prompt revulsion. We have failed to give any prominence in this study to the solar plexus of nerves

—the cerebrum abdominale. This plexus has much to do with shock and suffering over many portions of the body. Its intimacy, also, with the cœliac artery (which is an axis) forming many connections, and springing directly from the aorta, tells us the “pit of stomach” is a powerful centre. In the absence of belt and pad, I have pressed my hand or small cushion between umbilicus and pit of stomach, pressing backwards and upwards, thus supporting the heart and diaphragm, and assisting the solar plexus in forcing back the stasic blood from cœliac axis into the general circulation.

ART. VII.—Qualitative and Quantitative Analysis to Determine the Presence and Amount of Sulphurous Acid Gas Absorbed by Rags Disinfected with Sulphurous Acid Gas.

By JAMES C. KELLOGG, M. D.,* Consulate of United States, Stettin, Germany.

In order to test the efficacy of the disinfection of rags by means of sulphurous acid gas, as prescribed by the U. S. Treasury Department circular of August 19th, 1892, I have recently made a series of qualitative and quantitative analyses of disinfected rags, which had been disinfected by the different rag exporters of this city, under my personal direction and supervision. This disinfection of rags is, and has always been, made in the evening. The rags, after the disinfecting rooms are closed and sealed by me, are left exposed during the night to the sulphurous acid fumes. Previous to the disinfection, the rooms are made, as far as possible, air-tight.

The samples of disinfected rags I examined and tested, qualitatively and quantitatively, were collected in the morning after the disinfection had taken place, and after the rooms had been aired. The samples were taken as follows:

1. From racks which are parallel to the floor elevation

* Dr. Kellogg, U. S. Consul at Stettin, a native of New Orleans, forwarded this article to Dr. Stanhope Jones, who placed it in the hands of his father, Dr. Joseph Jones, who kindly favors this journal with it.

$\frac{1}{2}$ –1 ft. (a) From the interior of the rag piles. (b) From the exterior of the rag piles.

2. From racks which are parallel to the floor elevation 3–8 ft. (a) From the interior of the rag piles. (b) From the exterior of the rag piles.

Preparation of the Samples for the Qualitative Tests: 250 grms. of each sample were macerated with 1000 grms. of water in a glass vessel; the percolate thus obtained measured 200 cc., which represented 50 grms. of disinfected rags; to this 200 cc. of percolate, 5 cc. of dilute sulphuric acid was added, transferred into a retort, and by means of a Leibig condensator distilled, until the distillate amounted to 150 cc.; to this 50 cc. were added, increasing the volume of the liquid to 200 cc., which was used for the tests as follows:

Chemical tests for sulphurous acid (SO_2). The smell was distinctly present.

1. Reaction upon metallic zinc plus dilute muriatic acid which caused sulphuretted hydrogen gas to be generated. Proof test with lead paper, causing the same to become brownish black in color.

2. Reaction upon nitrate of silver solution, causing a white, cheesy precipitate of Ag_2SO_3 , which on boiling produced a gray precipitate of metallic silver.

3. Reaction upon sulphuretted hydrogen gas, causing a milky white coloring of the liquid, due to the precipitation of sulphur.

4. Reaction upon chloride of gold solution, causing on boiling a purple brown precipitate of metallic gold.

5. Reaction upon mercuric-nitrate, causing a gray precipitate of metallic mercury.

The above reactions were obtained readily from each sample of disinfected rags tested, while a counter-test of samples of non-disinfected rags gave none of these characteristic reactions of sulphurous acid.

Quantitative Analyses: These analyses were made to ascertain the quantity of sulphurous acid absorbed by the

samples of disinfected rags examined. The preparation of the samples was made in the same manner as for the qualitative analyses. The percolates were distilled until the several distillates amounted each to 100 grms., which represented 25 grms. of disinfected rags. Each 100 grms. distillate was treated with permanganate of potassium solution (tritation method), of such a concentration that 1 cc. of the solution would neutralize 0.005 grms. of sulphurous acid.

The following results were obtained:

A. Samples taken from the racks which are parallel to the floor elevation $\frac{1}{2}$ –1 ft.

Sample No. 1, from the interior of the rag piles, contained 0.026 grms. SO_2 in 25 grms. rags.

Sample No. 2, exterior of rag piles, contained 0.042 grms. SO_2 in 25 grms. rags.

B. Samples taken from racks which are parallel to the floor elevation 3–8 ft.

Sample No. 3, from the interior of the rag piles, contained 0.038 grms. SO_2 in 25 grms. rags.

Sample No. 4, from the exterior of the rag piles, contained 0.058 grms. SO_2 in 25 grms. of rags.

C. Samples taken from racks which are parallel to the floor elevation $\frac{1}{2}$ –1 ft.

a. From the interior of the rag piles:

Sample No. 5 contained 0.068 grms. SO_2 in 25 grms. rags.

Sample No. 6 contained 0.026 grms. SO_2 in 25 grms. rags.

Sample No. 7 contained 0.047 grms. SO_2 in 25 grms. rags.

Sample No. 8 contained 0.046 grms. SO_2 in 25 grms. rags.

Sample No. 9 contained 0.034 grms. SO_2 in 25 grms. rags.

D. Samples taken from racks which are parallel to the floor elevation 3–8 ft.

a. From the exterior of the rag piles:

Sample No. 10 contained 0.070 grms. SO_2 in 25 grms. rags.

Sample No. 11 contained 0.048 grms. SO_2 in 25 grms. rags.

Sample No. 12 contained 0.105 grms. SO_2 in 25 grms. rags.

Sample No. 13 contained 0.035 grms. SO_2 in 25 grms. rags.

Sample No. 14 contained 0.049 grms. SO_2 in 25 grms. rags.

The above results show that the disinfections of the rags from which the samples were taken were effective.

ART. VIII.—Uselessness of Drainage in Abdominal Section for Tubal Diseases, Etc.***By WM. R. PRYOR, M. D., of New York, N. Y.,**

VISITING GYNÆCOLOGIST ST. ELIZABETH HOSPITAL; LECTURER ON GYNÆCOLOGY N. Y. POLYCLINIC.

I present to-night a dozen or so specimens—some old, some recent—and will save you the detailed accounts of them and the cases. Suffice it to say that they illustrate about every variety of tubal inflammation, as we meet with it—from the most acute infection, with tubes almost necrotic, to the older lesions of chronic pyosalpinx and ovarian abscess. Even by ocular examination of these specimens, the multitudes of adhesions can be appreciated which exist with the majority of them. In some of the larger abscesses pus escaped in their removal, and in all of the most acute, such escape took place. Some of the operations were done in Trendelenberg's posture. In no case was the abdomen flushed or irrigated, and in no case was drainage employed. No case had a degree of temperature, save one due to imperfect preparation of partially strangulated bowels. No two specimens are from the same case, and the specimens have not been shown before. All recovered. They have been selected merely to form a series and furnish a text. Preliminary curettage was done whenever there was a suspicion of septic endometritis.

I exhibit these specimens for the purpose of adding to the steadily accumulating evidence, showing the utter uselessness of drainage in these cases. Did I stand alone in this matter, I would not dare come before you with such a statement. But backed, as I am, by such men as Howard Kelly and Baer in this country, Leopold and Winckel with nearly all prominent operators in Europe, I feel that my statements have some weight.

Let us first consider the methods of the men who drain. They still cling to washing out the abdomen, to chemical antisepsis, and the drainage-tube. If you irrigate, you must use the tube to remove the fluid you thus introduce.

* Read before the New York Obstetrical Society, May 2, 1893.

Now, certain careful investigations have been made as to each step of their method, and certain conclusions reached.

1. *Antiseptics*.—These may not be introduced even much weakened into the peritoneal cavity without injuring the endothelium. Even plain water causes it to exfoliate, and destroys the serum's antiseptic properties.

2. *Irrigation*.—If warm sterile water be introduced and followed by the injection of pathogenic germs, infection takes place; whereas, if the latter are not preceded by the use of water, such infection does not ensue. Those experiments were made on the healthy peritoneum. How much more injurious must flushing be when the peritoneum has been wounded by operative procedure? Besides, flushing disseminates any possible germs in the pelvis to the general cavity among the intestines.

3. If the drainage tubes are introduced, it has been proved impossible to avoid post-operation infection without the use of antiseptics. So a clean operation is rendered foul by them.

4. The advocates of the drainage-tube are opposed to preliminary cleansing of the septic uterus, but prefer to operate without the benefits to be derived from that procedure. They advise the use of the drainage-tube to remove blood and serum, which may give rise to sepsis. Let us consider that—

a. Large quantities of blood may be injected into the peritoneal cavity without injury, and is rapidly disseminated throughout the cavity, not remaining in one locality. So much for experiment. Clinically, we know that severe hæmorrhage may occur into the peritoneal cavity from ruptured spleen, mesenteric vessel, or extra-uterine pregnancy, without septic manifestations, provided the ratio of escaped blood to body weight be not too high.

b. Fresh blood serum, such as escapes from raw surfaces, is not only innocuous, but is positively antiseptic—thousands of typhoid bacilli, introduced into such, being dead in twenty-four hours. But when the serum is diluted by

water, its germicidal property is destroyed. Clinically, we know that cases producing the most serum are least liable to infection, and broad ligament cysts rupture without symptoms.

So much for the tolerance of the peritoneum. The only sepsis the drainage-tube removes is that which is introduced by the operator, and the only irritating fluid drained away by it is what he has put in.

The results of the use of the drainage-tube are—

1. Possible infection of the wound.
2. Probable ventral hernia.
3. Inevitable binding together of the intestines by adhesions.

It is utterly impossible to remove these growths and close the belly without drainage unless we see what we are doing, do a perfectly aseptic operation without the use of strong chemicals, and catch by means of gauze any septic contents of sacs evacuated. Presumably, the advocates of drainage have been forced by experience to give vent to sepsis left remaining after, or introduced at the time of operation; and yet that may scarcely be, for they depict their results as almost perfect. Yet we are led to wonder why it is that they not only drain the easy cases, but also aspirate the difficult ones per vaginam. For it is not believed that they aspirate the simple cases and remove larger and more adherent pus-tubes. I presume no one will claim that broad ligament abscess is common; in fact, most of us believe it very rare. The vast majority of cases tapped per vaginam are cases of pyosalpinx—not broad ligament abscess. Then, if the method of the men who use drainage-tubes is so perfect, why do they aspirate so large a percentage of their cases per vaginam? The palliative treatment is applied to the difficult cases, and the perfectly simple ones are given irrigation, drainage, and disagreeable sequelæ. The truth is, no longer may the rules be laid down that the raw surfaces left from removal of those growths must be drained by tubing, and no longer can we adhere to the method of washing out the abdominal cavity when pus escapes during the operation. The

method used should be so perfect that both are rendered unnecessary.

As for evacuating the pus from below, were that advocated as a means merely to gain time and allow the woman to build up for a radical procedure, we might believe it rational. But inasmuch as, in the last report of forty cases by the Drs. Wylie, advocating this procedure, only about 17.5 per cent. of cases so tapped were subjected to the radical operation, we may infer that the treatment is merely palliative. The remaining 82.5 per cent. of cases are not well, but the women still have their pus sacs within them. For it is admitted among surgeons that where suppuration takes place in a preformed sac lined by epithelium, not only may the pus be evacuated, but the sac must be extirpated. That is one of the established rules in surgery. Somebody will have to remove those pus sacs, and in a much worse condition than before they were tapped. Of course if these gentlemen who stick trocars into women's vaginas claim that the abscesses *they* find are in the broad ligament, we can only say that they are reverting back to the old cellulitis theory of the origin of pelvic pus, or else nine hundred and ninety-nine pathologists and gynæcic surgeons out of a thousand are wrong in stating that broad ligament lymphangitis is rarely the cause of pelvic abscesses, except after labor, and, under all circumstances, they are infrequent.

We are, then, forced to the conclusion that these inflammatory pus-producing growths should be removed by a method which does not necessitate drainage; and that to aspirate them from the vagina is merely a makeshift; is not radical; leaves behind the pus-sac to re-fill again in a worse condition than before, for now it is firmly adherent to the vagina by a mass of scar-tissue due to the closure of the track of the drainage-tube. My experience is limited; so is Kelly's, so is Baer's, so is Leopold's, so is Winckel's—all experience is limited. Though the combined experiences of men who get from completed, non-drained operations without sequelæ a mortality of about three per cent. may be

called limited, to be sure, yet they certainly demand respectful recognition. Suspicion rests not upon such limited experiences, but upon that technique which embraces drainage and vaginal tapping. Drainage is not only useless, but it also conduces to ventral hernia, and invariably leads to the formation of a multitude of adhesions. We must consider any case drained as an incomplete operation.

Some cases must be drained, but not by a small glass tube. Such are cases where breaches are made into sound tissue, where the unclean vagina or bowel is opened, and cases which have been previously tapped. With the possibility—now, thanks to Krug's vigorous presentation of the advantages of Trendelenberg's posture—of seeing what we are doing, such accidents are rare.

Altogether, I cannot refrain from stating my belief that the advocacy of vaginal tapping is a step backwards, and the method which requires drainage is faulty and not to be adopted. Understand me; all I have said is limited to pus tubes or ovarian abscess, generally classed as pelvic abscess. The report of even innumerable operations, with a low rate of mortality, if irrigation and drainage have been employed in the simple cases, and vaginal tapping in the more acute and difficult, is the report of poor work, incomplete work, work with a great deal left behind in the way of possible hernia and inevitable false bands. The larger the number of such operations reported, the more damning is the argument against the method under which these women have suffered. For the convalescence of drainage-tube cases is usually febrile, showing that infection has occurred. The adhesions are a constant cause of irregular intestinal action, and render the patient liable to intestinal obstruction, while the ventral hernia must be cured by a second cœliotomy.

The specimens of pyosalpinx and ovarian abscess presented to-night, together with what I have previously shown or done, contribute a series of thirty-two operations. None were drained, though all were adherent. None had been tapped per vaginam. All recovered.

15 Park Avenue.

ART. IX.—(1) *Alopecia Areata*; (2) *Vitiligo*; (3) *Herpes Zoster*; (4) *Pruritus*. Notes from Ten Years' Service (4131 Cases) at the Philadelphia Dispensary for Skin Diseases.

By HENRY W. STELWAGON, M. D., of Philadelphia, Pa.,

CLINICAL PROFESSOR OF DERMATOLOGY IN THE JEFFERSON MEDICAL COLLEGE;
DERMATOLOGIST TO THE PHILADELPHIA HOSPITAL, ETC.

(1) *Alopecia Areata*.—This affection was met with in 16 instances, or a proportion of about four-tenths of one per cent. As to sex, 10 were males and 6 females. The disease was seen at all ages: two cases under the age of ten; four between ten and twenty; three between twenty and thirty; five between thirty and forty, and but one above this age; the youngest was aged eight, and the oldest sixty. The disease was seated upon the scalp alone in eleven cases; upon the scalp and face (bearded portion, or eyebrows, or eyelashes) in three cases; bearded part alone in one case, and in two instances the hair loss was essentially universal. In the scalp cases, usually two or more half-dollar to dollar-sized patches were present. In almost all the cases, the loss of hair was rapid—that is, taking place in the course of one or two weeks. The duration of the disease, when the patients came under observation, varied from two weeks to four years.

Of the two cases of universal alopecia, both subjects were males—one a painter, aged 32, and the other a moulder, aged 60. In the former, the hair had begun to come out two and a half months previously, and within two weeks there was none remaining on any part of the body, except one to two hundred scattered, isolated hairs upon the scalp; in the second case, it was complete, except a few scattered hairs upon the bearded part, and had begun to fall out two years before, following an acute illness, and within ten days thereafter the patient was hairless.

A history of recurrence was not uncommon. The most striking in this respect was the case of a woman, aged 32, who for three years had been devoid of hair on the scalp,

and for a year and a half, eyebrows and eyelashes had also been absent; she first had the disease as several patches upon the scalp, when seven years old, from which recovery was made; when 15 years old, the disease returned, two patches presenting, which soon disappeared; she was free from the disease till the present onset, four years ago; her general health had been good, and there was no apparent explanation for the attacks. This lack of constitutional cause or explanation for the affection was the rule, although in several instances there was increased perturbation of a naturally nervous temperament. In no instance was a history of contagion given.

Treatment was, in every case, both by constitutional and local medication; the former in the line of improving the nerve tone, with such remedies as arsenic, strychnia, phosphorus, quinia and iron; and the latter having in view the production of a mild, persistent irritation, with such applications as sulphur ointment, oleate of mercury ointment, five to twenty per cent. strength; naphthol ointment, a half to two drachms to the ounce; tarry oils and salves; weak chrysarobin ointments, ten to forty grains to the ounce; tincture of cantharides, and the like. The two universal cases failed to respond even temporarily.

(2) *Vitiligo*.—Eleven cases were recorded, five males and six females. All were under the age of forty; the youngest was a lad of fifteen, who presented patches upon the face. In four cases, the disease, which had been of from a few months' to four years' duration, was limited to the backs of the hands and wrists. In one case—a negro, aged 25—presenting, when seen, patches upon the hands and shaft of the penis, there had previously been large areas upon the face and breast, which had entirely disappeared. In all cases, the progress of the disease was slow. No new information bearing upon etiology was discoverable. In one or two cases, the disease retrogressed slightly while under observation. Treatment consisted mainly of such alteratives as strychnia, phosphorus, arsenic and iron; pilocarpin was tried, but with no perceptible effect.

(3) *Herpes zoster*.—This disease was observed in twenty-eight instances, a proportion of a little less than seven-tenths of one per cent. There was a large preponderance of males, twenty-one being of this sex, while but seven were females. As judged by these cases, season had apparently but little influence. All ages were noted; although it was most common during the age of active adult life, five of the cases occurred in those under ten years of age, and five in those over sixty. Out of twenty-three cases, in which it was recorded, the disease was upon the left side in thirteen instances, and on the right in ten. As to particular region affected, there were—

Z. facialis,	4 cases.
" occipito-collaris,	3 "
" cervico-subclavicularis,	2 "
" cervico-brachialis,	1 "
" dorso-pectoralis,	13 "
" dorso-abdominalis,	2 "
" lumbo-inguinalis,	1 "
" lumbo-femoralis,	1 "
Site not recorded,	1 "

While precursory neuralgic pain was a common symptom, it was by no means noted in all; in most cases the pain was concomitant with the eruption, and it was more of the nature of a soreness than of a neuralgic character. The course of the disease, in all these cases, was favorable, recovery taking place in ten days to several weeks. In most of the instances, the disease was attributed to exposure to cold or wet. In one instance, the outbreak occurred while the patient was taking moderately large doses of arsenic for another disease.

The object of all local treatment was the protection of the affected region, and consisted variously of the free use of a dusting powder, over which was placed a layer of cotton; of salicylated oxide-of-zinc ointment applied constantly as a plaster; and in those instances in which the disease was of an abortive type, the lesions scarcely reaching active vesiculation, a simple covering of cotton or patent lint was advised. In sore or neuralgic cases, an

ointment containing small quantities of opium and cocaine was spread over the parts. In a few cases, the protection was afforded by coatings of flexible collodion.

Constitutional treatment, outside of special indications, consisted in the administration of phosphide of zinc, and quinia; and, when needed, narcotics.

(4) *Pruritus*.—Of this disease, 136 cases were observed, a proportion of 3.3 per cent.; of these, 89 were males, and 47 females. In this number were included four cases of so-called pruritus hiemalis. In 92 patients, the itching was general; in 11, it was limited to the legs; in 10, of whom seven were males and three females, to the genitalia; in seven to the anus; in four to the scalp; in four to the trunk; in five to the arms and legs, and in three it was not noted. Season had apparently, on the whole, but little, if any, influence; forty-three cases came under notice in the first three months of the year, forty cases in the second quarter, twenty-seven in the third, and twenty-six in the last three months of the years. The disease was observed, as is well known, more frequently in advanced life, as is shown in the appended table:

Under 20 years,	4 cases.
Between 20 and 30 years,	20 "
" 30 and 40 years,	25 "
" 40 and 50 years,	20 "
" 50 and 60 years,	22 "
Over 60 years,	45 "

As to *etiology*, in a few instances, diabetes or albuminuria was the suggestive factor; in many, gastric and intestinal indigestion; in some, the lithic acid diathesis; but, in the large proportion of cases, it was difficult to find any explanation of the pruritus beyond the acceptance of some obscure functional perversion of the cutaneous nerves.

Constitutional treatment was varied according to indications; in many cases, free action of the bowels, some regard to diet, and the administration of an alkali, such as the sodium or lithium salts, had a curative influence. Small doses of atropia sometimes acted quickly. Among the

most valuable of external applications advised, may be mentioned—carbolic acid lotions, thymol lotions, resorcin lotions, liquid carbonis detergens diluted with several or more parts water, and alkaline lotions. In those cases of pruritus of the legs, in which the skin was harsh and dry, relief was afforded by mild salicylated ointments. In the localized forms, cocaine and menthol ointments and lotions were of value.

ART. X.—Treatment of Organic Stricture of the Urethra by Electrolysis.*

By F. B. BISHOP, M. D., of Washington, D. C.

In bringing to your attention the treatment of organic stricture of the urethra by electrolysis, or what has become generally known as "Newman's method," I am not unmindful of the fact that, within the past ten years, this subject has been pretty thoroughly canvassed, and that it has had its advocates, who have enthusiastically applauded its merits, while others have been equally as enthusiastic in opposing this method.

In order that we may treat fairly the subject at issue, it is well that a careful examination shall be made as to the nature of an organic stricture, as well as the experience of those who have made a special study of this subject for many years, and have treated thousands of cases by the old method. In speaking of stricture, Sir Henry Thompson says: "It would save some confusion if we employed this term for only one kind, namely, organic stricture." "And that organic stricture is a deposit of lymph round the canal of the urethra, at some point which, not allowing the canal to open to the stream, narrows the current to that extent. This lymph forms fibrous bands, which subsequently become somewhat rigid, while they more or less encircle the passage."

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, held April 10, 1893.

Again, says this eminent authority, "And this organic stricture is a permanent condition. Once acquired, it cannot be entirely dissipated by any known means. It cannot be removed by absorption, although the contrary has often been affirmed. You may dilate it, you may cut through it, but there, more or less, the morbid element must always remain. When a man once has organic stricture, he has it forever. If any exceptions exist, their rarity is so extreme as practically not to invalidate the axiom laid down. Whatever treatment you employ, there is always a greater or less degree of rigidity in the urethral walls ever afterwards, and this increases with age."

Dr. E. L. Keyes, of New York, on deep urethral stricture, says: "I have approached this question by giving some personal cases, in which permanent cure seemed to have followed the thorough division of stricture by perineal section, while acknowledging the failure of accomplishment of radical cure in a vast majority of the cases operated on."

He speaks of the different kinds of organic stricture, and the ease with which the one may be cured or relieved as compared with the other, but I incline to the belief that organic stricture is organic stricture, and any difference that may exist in particular cases is a difference in degree and not in kind.

The conclusions reached by these two leading specialists in their respective countries offers very little encouragement to follow the old line of treatment—most especially when we remember that in the cutting operations, fatal cases following are not very rare; besides, stretching with sounds or divulsors is a painful operation, very frequently followed by chills and sometimes by severe fevers. I can imagine no more painful and uncomfortable condition than that of, in the first place, cutting the deep urethra, and, in the second place, a daily passing of sounds over the cut and tender surface. Of course, the pain can be dispensed with by the use of an anæsthetic, but the administration of an anæsthetic is not a simple operation; neither is it devoid of danger; and I do not think that we have any right to place our patients' lives in danger when it can possibly be avoided. Besides, the enforced rest necessary, combined

with the disadvantages before mentioned, should cause the careful physician to pause and consider that time and experience has not devised a perfect instrument or a perfect operation for urethral stricture by the old methods.

The treatment of urethral stricture by electrolysis, or "Newman method," I think offers peculiar advantages, and gives equally as good, if not better, results. It enables us to cure our patients with but slight discomfort and without danger.

Dr. Robert Newman, of New York, has used this method about twenty-five years, and during that time, according to his statement, he has treated numbers of cases with uniform success. Leading surgeons throughout this country have been severe in their criticisms of the Newman method, and have cast a shadow of doubt upon the claims of Dr. Newman. On the other hand, he has been supported by many men of prominent standing in the profession, both in this country and in Europe, who have taken the trouble to master the method, and have practiced it successfully. Some of the critics, I think, have been rather unfair to Newman, inasmuch as they are hardly inclined to give him credit even for sincerity in the reports of his cases cured, but content themselves with a wholesale condemnation of his method, because they have tried it a *short time* and failed to cure their cases.

You are no doubt familiar with the requirements and details of the operation. A good galvanic battery; a set of perfect conducting cords; a rheostat, and, if convenient, a milliampere metre; a set of olive tipped electrodes, varying in size from about No. 8 of the French scale to No. 30; a set of olive tipped soft bougies, about the same sizes. Locate the stricture and get its calibre; select an electrode one or two sizes larger than bougie that passed the stricture with difficulty, and attach this to the negative conductor; pass the electrode carefully and gently down to the stricture, and make very gentle and gradual pressure; at the same time, with a large surface electrode placed upon abdomen and attached to the positive conductor, make firm and steady pressure. Turn

the current on very gradually, and stop at once when patient complains of slight burning sensation at the negative pole, whether you have one milliampere or six. I usually limit my operation to five minutes, unless the electrode passes the stricture before that time, and if at any time the electrode in the urethra burns at all uncomfortably, I turn the current off until the burning nearly ceases.

After a constant experience of eight years, I am thoroughly convinced that the treatment of organic stricture of the urethra by electrolysis is the best method now known to the profession. I have experienced many failures in the early part of my electro-therapeutic career, and in the past four or five years have had the exquisite pleasure of curing some of the cases by this method that I failed completely on two or three years before. Therefore I feel that I am in a position to know that we are not born with an inherent knowledge or skill necessary to treat these cases successfully by electrolysis, but it is something that must and can be learned by constant study and practice, and that we are doomed to many failures before we can hope to approach with a degree of certainty of success every case of organic stricture of the urethra. It requires an experience gained by daily practice, great gentleness of manipulation, and lots of patience and perseverance. But that our efforts will eventually be crowned with success there is not the least doubt. The blessings that we render to humanity by our persistence is a glorious compensation. And when I voice the claims of Newman, that organic stricture of the urethra can be cured by electrolysis, with certainty, with very little discomfort, without the patient losing time, and that, when the operations are properly and skillfully performed, they are absolutely without danger, I am simply giving the experience of eight years of constant practice and many cases successfully treated. In the face of these facts, I am unwilling to concede the province of determining the merits and demerits of this method to any one, be he ever so eminent, who has not carefully studied and practiced it sufficiently

long to entitle him at least to the name of critic. When the age of the two methods are considered, and the results of both carefully compared, the light of progress must of necessity shine upon the new and mark it as the method of the future.

I could report many cases treated and cured by electrolysis, but as I dislike to impose upon good nature too long, I will conclude my paper with a report of two cases that are in many respects interesting:

CASE I.—A little more than four years ago my services were sought one night to see a gentleman, about 25 years of age, who had sought relief in a bath tub of hot water, and had there fainted. His trouble proved to be retention of urine in the bladder, due to the presence of two strictures—one an inch from meatus and the other about five and one-half inches. He called upon me a few days later and assured me that he had not passed a stream of water for years that was projected more than one inch from meatus. As the lower stricture was much the tighter and was the one that gave him the greatest trouble, the upper one was immediately cut and healed to the size of No. 30 French scale. The lower stricture was treated by electrolysis.

I received a note from him a few days ago in answer to an inquiry as to his present condition, and a request that he send me some history of the case before I saw him. I quote from his note:

"I was first treated in 1883 at Jacksonville, Fla. In this instance the stricture was burst, and no treatment followed except a wash. Again, in 1885, I was treated in Cincinnati, Ohio, the stricture being again burst; and this was followed by passing sounds every day for about one week, when it became so painful that I was thrown into nervous chills and had to abandon the treatment. The case then ran on until 1889, when the passage became almost entirely closed, and it was with the greatest difficulty that I passed water at all; and at times the urine would stop entirely and accumulate in the bladder, producing the most intense agony, frequently causing me to faint. The only relief that I could get at these times was to get into a tub of water as hot as I could stand, and then sometimes it would be hours before I would derive the slightest relief. In April, 1889, I first tried treatment by electricity, since

which time I have had no trouble, except at upper stricture, which was cut; that, at times, feels uncomfortably small."

CASE II.—The case of Z. presents peculiarities, psychical as well as physical. At the outset of his malady, the psychical peculiarities largely predominated. At the age of 15 he masturbated for the period of about two months, but, realizing the danger, ceased the practice, but suffered an unusual degree from nocturnal emissions ever afterwards. At the age of 22 he began to experience an irritable condition of the urethra—a morbid condition easily increased by the contemplation of sexual ideas. This urethral irritability was invariably followed by stiffness of the neck, pains in the head, and burning sensations in the legs and arms. It was not until the age of 23 that the patient had connection with women, but did not go to special excess. At the age of 28 he contracted gonorrhœa, which lasted for a period of six months, and contracted a fresh case a year later. When cured of the latter he went for some time without experiencing any particular trouble, more than the old irritable sensations at times, followed as usual by burning sensations in the extremities. Last summer, however, he began to feel very intense irritability of the urethra, which affected his health in a remarkable degree, his mind being concentrated continually on the morbid state of the sexual organs. Pains were felt about the abdomen, beneath the ribs, and at the pit of the stomach. He was subject to delusions, which, however, he was able to overcome. The patient was treated by physicians for a variety of troubles, such as general nervous debility, dyspepsia, acidity of the urine, and was often told that nothing ailed him, and that his disease was chiefly of the imagination. But this gentleman was suffering intensely in body and mind; and obtaining no relief, went to Dr. Johnson Eliot, who recognized his malady to be that of sexual neurasthenia, and referred him to me. I found upon examination that he was suffering largely from stricture, which was treated by electrolysis. The gentleman is still under treatment; his condition, both physically and mentally, has steadily improved; he has gained in flesh and improved in spirit, and I hope eventually to make a complete cure of his case. This case is especially interesting on account of the psychic phenomena. The irritation from the slight degree of masturbation practiced by this patient produced nocturnal emissions from which he ever afterwards suffered, this in turn reacting through a highly strung nervous organization upon the

brain, keeping the mind fixed more or less all the time upon the sexual organs. The protracted cases of gonorrhœa produced stricture, which of course added to the irritation and increased his mental troubles proportionately.

1913 *I Street, Northwest.*

ART. XI.—Prophylaxis in Yellow Fever, Scarlet Fever, Diphtheria, and Typhoid Fever.

By JOSEPH JONES, M. D., LL. D., of New Orleans, La.

It is not my intention to discuss the merits of the various measures suggested and employed for the prevention, arrest or modification of yellow fever, scarlet fever, diphtheria, and typhoid fever. My object is simply to record some practical observations.

YELLOW FEVER.—In 1878, whilst an epidemic of yellow fever was prevailing in New Orleans, I determined to test the value of sulphate of quinia as a *prophylactic* against yellow fever.

I had six children—three boys and three girls—who had never had the disease. I was also in the same condition.

I commenced the daily administration of quinine in small doses shortly after the yellow fever was declared to be *epidemic*, but abandoned the effort after a few days, as it nauseated my children. Each child was prostrated by the fever, and finally, in October, I was attacked, and did not recover my ability to walk or leave my sick bed until the latter part of December. One of my servants was also attacked by the disease.

I had, in all, eight cases of yellow fever in my family in 1878—all recovered.

Now, if I had used any prophylactic—quinine or sulphate of sodium—I would have been disposed to have extolled it as the cause of the favorable result of unusual recovery in my household and under my own treatment.

SCARLET FEVER.—I had seven children liable to scarlet fever, which attacked one of my daughters in 1876. The

case terminated favorably, and no other case occurred, although no measures of isolation, and no agents, as the sulphite of sodium, were employed.

DIPHTHERIA.—In 1882, my two youngest children were attacked by this disease, and were extremely ill; and at one time I had made all the necessary arrangements for the performance of tracheotomy. Both cases recovered, and no other cases have ever recovered amongst the nine members constituting my immediate household. No measures of any kind were taken to arrest or prevent diphtheria.

TYPHOID FEVER.—In 1887, my youngest daughter was attacked by typhoid fever, apparently contracted during a visit to some friends in the country. No effort was made to isolate the disease, or to prevent or arrest its spread. The case terminated favorably, and has been the only instance of typhoid fever in my family.

It is evident that if I had used various agents, as sulphate of quinine or sulphite of sodium as prophylactics, I would have formed erroneous conclusions as to their value in warding off these various diseases.

I desire simply to place these facts on record at the present time, deferring any discussion of the theory and practice of prophylaxis in infectious diseases to a future time.

156 Washington Avenue.

ART. XII.—Perversion of Sexual Instinct—Sadism in Southern Negroes—Its Remedy, Castration,

By ELLIOTT T. BRADY, M. D., of Marion, Va.

RECENTLY ASSISTANT PHYSICIAN IN SOUTHWESTERN [VA.] LUNATIC ASYLUM, ETC.

Without desire to thrust myself into prominence by joining, unasked, the open letter correspondence between such eminent gentlemen as Drs. Hunter McGuire and G. Frank Lydston, I desire to contribute my quota to a question of such general interest, the more particularly as I have given the subject much thought, and the occurrence of one of those crimes, which has just taken place in our community.

The open correspondence between the above named gentlemen, and published by you in the May number of your journal, on the subject of "Sexual Crimes Among the Southern Negroes," opens up a field which, if given the attention and cultivation it deserves, cannot but yield a glorious fruitage in a better understanding and, it is to be hoped, an improvement of the public morale. Without enlarging upon the subject of the enormity of these crimes, than which none could be more revolting, I present my views upon this type of crime and the relation of the Southern negro thereto.

The sexual acts proper are coitus, masturbation, and pederasty, or bestiality. If sexual power be diminished and sexual desire at the same time increased, all manner of perversion of the sexual instinct becomes not only possible, but probable. Excessive indulgence by frequent repetition of either of the above forms—in short, frequent excitation of the sexual centres, begets such a condition of diminished virility with increased desire. Granting, as I think all will, that this condition is the foundation of all sexual perversion, and, therefore, of the crimes under consideration, let us consider what is the nature of these crimes, what their origin, and how their frequency among our Southern negroes may be explained.

What is the crime? To answer this, we must distinguish between *perversion* (disease) and *perversity* (vice); and, to do this, the whole personality of the individual should be considered, in connection with the impulse originating and the circumstances surrounding the act. Simple rape is rather a perversity than a perversion of sexual instinct, and includes only cases of temporary sexual excitement, where the desired coitus is obtained generally by threats, frequently by violence, but *rarely marked by excessive cruelty*, only sufficient violence being used to overcome resistance; and when murder accompanies the act, it is unintentional. These simple rapes, then, being in my opinion only perversity, should be eliminated from this discussion, both from

that fact and the fact that it is no less common among the white than the negro race.

Perversion of sexual instinct may, for convenience, be divided into two classes—those shown toward the same sex and those shown toward the opposite sex. In this discussion we have to do only with the latter, which we will subdivide into three types :

(a) *Lust—Murder*, or “*Sadism*”—the association of violence and active cruelty with lust.

(b) *Passivism*, or “*Masochism*”—the association of passively endured violence and cruelty with lust.

(c) *Fetichism*—the association of lust with the ideas of certain portions of the female, or with certain articles of her attire, as the hand, foot, shoe, glove, apron, etc.

A certain amount of *fetichism* is innate in man, and finds frequent proof in the interest manifested in unintentional exposure on the part of a female. “*Sadism*” and “*passivism*” are almost exact counterparts. In “*sadism*,” there is a desire to *inflict* pain and *use violence* towards the opposite sex. In “*passivism*” the desire is to *suffer* pain and *be subjected to violence at the hands of the other sex*. All the acts and situations used by the “*sadist*” in the active role become the object of the desire of the “*passivist*.” Further illustration of the perfect parallelism between them could be given, but I do not wish to make my article too long.

From the almost universal and excessive display of cruelty accompanying the crimes in question, I do not hesitate to classify them as “*sadism*,” or “*lust-murder*,” the two being but different degrees of the same psychopathic state, and differing from rape in that there is *more violence used* and *cruelty displayed* than is necessitated by the resistance offered. Further, the rapist derives sensual pleasure from the sexual act *only*, whereas the “*sadist*,” on the contrary, seems fiendishly to gather satisfaction from the violence exerted, the muscular action called into play, and the cruelty exercised; also the mental images of lust, power, etc., conjured up by the struggles and suffering of the vic-

tim, and *not from the sexual act itself*, which is frequently omitted.

It is by no means to be inferred that the "sadist," in the exercise of his fancies, or even in his sadistic acts, experiences the orgasm or ejaculation of semen which is the sole object of the rapist. His pleasure is not in that, but in the psychopathic state, which state may be likened to that of ecstasy, even lasting for hours. But it is true, sexual connection is evinced by the facts—1st, of its being aroused only at times of sexual excitement; 2d, by its sudden cessation should a seminal ejaculation occur; and, 3d, by the fact that in the sadistic individual, where cruelty and lust are associated, not only does lustful emotion awaken the impulse to cruelty, but *vice versa*, cruel ideas and the sight even of cruel acts cause sexual excitement; and, for this reason, individuals of perverted sexuality are especially prone to cruelty.

And now, having stated my views as to what the condition is, let us consider *why it is so frequent among the Southern negroes*. It is so, I believe, for the following reasons:

Cruelty is a natural attribute to primitive man. The instinct to fight and to destroy was characteristic of historic man and to the uncivilized races of to-day. With them to fight, and not only to destroy, but to torture, their enemies, was their prime object. Civilization is engendering new ideas, but provides new objects, and the same rule holds good—a survival of the ancestral tendency. The conquered must not only be overpowered, but tortured, to satisfy the unknown but resistless impulse. The same impulse leads even the more intelligent murderer to revisit the scene of his crime, and lends to all of us the tendency to be attracted by pugilism, cock-fights, and executions—the coarse and blunted ones among us having even the sense of pity smothered to silence by the inexplicable, yet none the less irresistible, satisfaction caused by the cruel scenes portrayed.

The Southern negro, but a few removes from his former barbarity and uncivilized state, has not as yet imbibed

sufficiently the principles with which civilization imbues us to overcome those barbaric instincts.

Another efficient factor which throws not a little light on the subject under consideration, and which, I think, one of the influences leading up to these crimes, is the olfactory sense. There can be no question as to the connection between the sexual and olfactory senses in nature. The odor thrown off by animals at the rutting season, the effect of different odors in exciting sexual desire in certain animals, as perfume in man, valerian in wolves, catnip in cats, etc., all go to prove this. Now, uncleanness and crowding are both the rule with the negro; take this in connection with the lessened sense of shame engendered by the crowding of the sexes, and the very pronounced racial odor, and we have a key to their apparently abnormal sexual appetite. Again, we all know that in the consumptive this appetite is usually increased, and, as Dr. McGuire states, they are most of them consumptive. I would then say that, taking the crowding, uncleanness, and racial smell as a basis influencing sexual thought and appetite, and the phthisical state and barbaric ancestry as the perverting influences, the existence of such tendencies is rather to be expected than wondered at.

The negro's recent state of bondage does not seem to me to enter into the problem, except in so far as the careful watching of them when in that state prevented them from having the opportunity to give their passion rein, and, of course, the added fact that constant employment gave little time for abnormal brooding over perverted ideas.

And, finally, *as to the remedy*. Increased enlightenment indubitably furnishes us with the best; and it must be pushed, even though it is, on account of our finances, slow at present. Regular labor is the next need, and manual training, as suggested by Dr. Lydston, is a powerful means to this end. A third means is the *enactment* and *enforcement* of a law requiring steady employment on the part of all who are without visible means of support.

Before concluding, I would like to add a few remarks as to the *substitution of castration for hanging*. This has long been one of my hobbies (by no means an original one), and I am glad to see it advocated by Dr. Lydston. But I would see it carried farther, and made applicable not only to this class of cases, but substituted entirely for the death penalty; also in epilepsy (organic) and acquired syphilis. Criminal tendencies are as indisputably transmissible by heredity as are syphilis and epilepsy, and the time will come when the continuous multiplication of criminal and diseased constitutions, which is the only real characteristic of our so-called enlightened age, will be cut short by some such legislation as will soon be demanded by the first law of nature—self-preservation.

ART XIII. — **Neuritis—Its Frequency, and Some Points as to its Causes, Symptoms, Diagnosis, Prognosis, and Treatment.***

By WM. C. DABNEY, M. D., of Charlottesville, Va.,

PROFESSOR OF PRACTICE OF MEDICINE IN UNIVERSITY OF VIRGINIA, ETC.

I do not propose to consider the subject of neuritis in detail. All I wish to do is to call attention to the frequency of the affection, and to *some* points in connection with its causes, symptoms, diagnosis, prognosis, and treatment.

My observation has led me to think that neuritis, in its milder forms, is a *much more common affection* than is usually supposed. At our University Dispensary, we see many well-marked cases, and I shall illustrate my remarks to-day by some of these cases, and some from my private practice.

The most common cause of neuritis, in its milder forms, is *cold or exposure*. In such cases, there may be either motor or sensory disturbances. Some forms of facial paralysis are illustrations of a neuritis involving a motor nerve, and interfering with its functional activity. All of us are familiar with such cases, and I will not dwell upon them. But it is

* Read before the Piedmont Virginia Medical Society, May 4th, 1893.

a little remarkable that sometimes there will be a recurrence of facial paralysis after a greater or less length of time. A patient of mine, the late Dr. A. R. McK., had three attacks—all apparently traceable to exposure. The attacks were several years apart, and each one lasted several months. Then a neuritis of the sciatic nerve frequently results from cold, and often proves very rebellious.

A second cause is found in *injuries of a nerve*. We have recently had an extremely interesting case of this character at the Dispensary.

Mr. N. was hurt last February in a steam saw-mill. His right hand was caught in the belt, and his arm was *violently* jerked and strained, and a paralysis of the extensor muscles of the hand and forearm immediately resulted; but, in addition to this, he was thrown against a piece of iron and received a severe injury to the skull just behind the right ear. There was bleeding from the ear, and, I hear, a watery discharge also; and he was deaf in that ear for some time. Under the careful management of a member of our Society, Dr. Wm. C. Shackelford, he recovered from the immediate effects of his injury, but a facial paralysis resulted in addition to the paralysis of the muscles of the arm. Dr. S. very kindly sent him to us, and he then had a paralysis of the right facial nerve, evidently peripheral in origin, because there was complete loss of electrical reaction when the faradic current was used.

Now, I think there was a fracture of the petrous portion of the temporal bone in this case; but the man is improving quite rapidly, and I have no doubt he will get entirely well in the course of a few months.

Another cause of neuritis is *diabetes*, but, as a general thing, you know, in diabetic cases, the sciatic nerve only is involved. These cases are generally considered neuralgic in character, but Gowers states that sciatica is nearly always due to an inflammation of the nerves. An old man has recently been coming to the Clinic who had an enormous quantity of sugar in his urine, and complained of blindness from diabetic cataract, and of some pain and numbness in his legs and feet; there was also loss of the patella tendon reflex.

I will not take up your time by speaking of *cases due to alcohol, lead, arsenic, etc.*, nor need I mention the *cases due to the infectious diseases*, especially diphtheria.

The symptoms of neuritis vary greatly in different cases, and I shall consider some of them only here.

Pain is a very common symptom. It usually occurs along the course of the nerve as well as at its distribution, and often occurs in paroxysms, which may be worse at night or in the early hours of the morning. In all, or nearly all, cases, *tenderness* along the course of the nerve is very marked.

Then, in addition to pain and tenderness, there are *various forms of paræsthesia*—numbness, tingling, or sensations of heat and cold, etc. In the diabetic patient of whom I spoke a moment ago, these symptoms were very marked. We see a great many cases at the Clinic in which these symptoms appear in washerwomen, and in men who are exposed to cold and rain. One very troublesome case was in the person of an old negro man who is a ditcher. In all of these cases, along with the paræsthesia, there is pain and tenderness along the course of the nerves involved.

The motor symptoms are not as prominent in the mild cases as are disturbances of sensation, but they are often present. They are less common, according to my own experience, in the so-called rheumatic cases, than in any other, though, as I have said before, facial paralysis is often due to cold. Sometimes there is only muscular weakness without any complete loss of motion. This was the case in a girl recently under treatment at the Clinic, in which the neuritis was probably due to syphilis. There was some muscular wasting in this case; the electrical reactions were impaired, and there were disturbances of sensation also.

The electrical reactions are usually impaired in cases of neuritis, but sometimes, when sensation only is affected, the response is normal.

Disturbances of nutrition—trophic disturbances—are of common occurrence in cases of neuritis. The *glossy skin* on the fingers in-cases of Colles' fracture, when the nerves are

compressed by callus, are well known. A day or two ago we had here an old woman, who had her hand mashed by the fall of a window upon it, and her fingers were very glossy, and the points were quite stiff and very painful when an attempt was made to bind them. Dr. Chancellor has recently showed me a very interesting case, in which there was "glossy skin" on the index and middle finger, following a rising on the back of the hand, and a very marked lividity of the palmar surface of the index and middle fingers and of the thumb. So marked was the blue color, that it suggested a local asphyxia and gangrene, as occurs in Raynaud's disease.

Another form of trophic lesion of the skin, which may occur in connection with neuritis, is *herpes*. But besides these skin lesions, *atrophy* and *degeneration* of muscles and *œdema* of the subcutaneous tissues are quite common.

I shall not trouble you with the other symptoms of simple and multiple neuritis, for time will not permit.

The diagnosis of neuritis from neuralgia is sometimes easy and sometimes extremely difficult. The distinctive features are (1) tenderness along the course of the nerves in neuritis, which, if present at all in neuralgia, is far less marked; (2) the motor, electrical and trophic disturbances which are absent in neuralgia, are *often* present in neuritis; (3), the persistence and long duration of neuritis.

The diagnosis from *anterior-polio-myelitis* is readily made by the absence of sensory disturbances in the latter affection. From *myalgia* it can generally be distinguished by the absence or much less degree of pain on movement in neuritis than there is in myalgia; and furthermore, in myalgia there is no tenderness along the course of the nerves.

The *course* of neuritis is usually slow, but as a general rule the ultimate prognosis is good, if the cause can be removed.

The treatment is addressed chiefly to securing rest and relieving pain.

Rest is in all cases of the utmost importance. Even in

those cases where exercise causes no pain at the time, rest will prove of the greatest benefit, as I can testify from personal experience.

In the rheumatic cases the salicylates or salol and counter-irritation have been giving me better results than anything else. When the pain is severe, galvanism sometimes gives relief. *Hot* applications are often grateful, but care should be exercised in their employment. A patient of mine—a physician—had a very ugly ulcer to form on his leg from the use of hot poultices during a severe attack of sciatica. The modern analgesics, antipyrin, acetanilide, phenacetine, etc., will often give relief, but frequently only when large doses are used, and then are not perfectly safe. A patient of mine took, by the advice of a friend (not a physician), ten grains of antikamnia every four hours for two or three days, and was taken with alarming symptoms of prostration.

After the acute stage has passed, tonics are of great benefit. We usually give to our Dispensary patients phosphide of zinc and extract of *nux vomica*.

Massage is also useful in these cases, but I doubt whether electricity is of much value at any stage of the disease, except in the form of galvanism in the early stages, to relieve pain.

Dr. O. S. Sargent, Anawan Ave., West Roxbury, Boston, Mass., has an advertisement of his Home for the treatment of patients addicted to opium habit, etc., in this issue, which is of service to many of our readers. Dr. Sargent's place is well known, and he stands endorsed by many able and excellent practitioners.

Wm. R. Warner & Co.'s Parvules.—Prejudice is a powerful opponent to progress. To affirm now that parvules administered according to the usual advice for their use, are not serviceable, is simply another form of saying that the party does not know what he is talking about. Messrs. Wm. R. Warner & Co. are entitled to the credit of manufacturing the best that can be made.

*Clinical Reports.***Case of Syphilitic Iris with Complications—Recovery.**

By HENRY L. MYERS, M. D., of Richmond, Va.,

ASSISTANT SURGEON RICHMOND EYE, EAR, NOSE, AND THROAT INFIRMARY.

While the case to be reported may be devoid of special interest to the ophthalmologist, I shall feel amply repaid if I succeed in offering some useful suggestions to the general practitioner, under whose supervision this important disease of the eye is continually being brought.

R. B., colored, aged 18, was committed as a State patient to the Richmond Eye, Ear, Nose, and Throat Infirmary, February 26th, 1893, with a history of serious eye trouble, dating back two months. The diagnosis of parenchymatous keratitis had been made, and the treatment had been the usual remedies for that disease, the patient having strenuously denied a syphilitic history. The result was that the trouble rapidly grew worse. Finally his physician determined to bring him to the Infirmary.

His condition at this time was deplorable indeed, being totally blind, there remaining to him only the ability of distinguishing daylight from darkness. There was severe photophobia and lachrymation; any pressure upon the eyes gave rise to great pain. The conjunctiva was much suffused—the characteristic rosy zone of fine sub-conjunctival vessels around the cornea being very marked; and just at this point, throughout the entire circumference of the cornea, the sclera was so much thinned from the co-existing cyclitis, as to cause a decided bulging forward of the cornea in both eyes. The intra-ocular tension was minus—a fact also attributable to the cyclitis.

Situated upon the irides of both eyes, at its upper and outer portion, were two large condylomata in a more or less broken down condition, which, in company with the turbid aqueous and the inflammatory exudate from the iris, completely filled both anterior and posterior chambers; and when we add to this keratitis, with pannus of both corneæ, it is hardly necessary to state that any attempt at an ophthalmoscopic examination of the deeper structures of the eye proved fruitless.

The following treatment was immediately begun and vig-

orously pushed: A 1 per cent. solution of sulphate of atropia was dropped into the eyes several times daily. Hot applications in the form of poultices and hot baths were used at short intervals during the day. Inunctions of mercurial ointment were practised night and morning until the patient was brought to a point a little short of salivation. Increasing doses of iodide of potash were administered three times daily, to toleration. The bowels were kept active with salines. Under this treatment, at the end of one month, the inflammation had greatly subsided; the condylomata had disappeared; the corneæ had become considerably clearer; some of the adhesions between the lens and the posterior surfaces of the iris had been broken up; the tension had become normal; and the vision had improved sufficiently to enable the patient to walk about and easily distinguish small objects.

The iris in each eye, however, from the long-continued inflammation and from the presence of the exudates, had begun to become atrophic, and the posterior synechia was so great that an iridectomy was deemed necessary, and was performed on the right eye April 3rd, with pleasing results, and on April 15th the same operation was performed on the left eye.

From this time up to the present, May 1st, the patient has made steady progress, and to-day his vision is, with the right eye, $\frac{2}{70}$; with the left, $\frac{2}{50}$. And with +2 Dc ax 105° for the right eye, and +2.50 Dc ax 75° for the left eye—these being the glasses which correct his faulty refraction—his vision easily comes within $\frac{2}{30}$.

Although he is now in condition to be discharged, the treatment already instituted will be maintained to a greater or lesser extent, and I think there is reason to hope that, with proper care, his vision will improve still further.

PHARMACEUTICAL PREPARATIONS.—“I have been prescribing Wm. R. Warner & Co.’s various preparations for some time, with the very best results. I desire to return thanks to them for their untiring zeal and scientific skill in the manufacture of pharmaceutical preparations.

J. M. PRATT, M. D., Aquilla, Texas.

Dysmenorrhœa Cured by Dilatation, Curetting, and Iodoform Gauze Packing.

By LUTHER SEXTON, M. D., New Orleans, La.

M. C., æt. 27; mother and father living; no tendency to hereditary disease; has had no serious sickness, except dysmenorrhœa, for the past six years—one-third of this time being spent in pain, one-fourth of the time confined to bed. She has been treated with all the palliative medicines, such as opium, bromides, chloral, viburnum, antipyrin and salicylate of soda, anodyne suppositories, hot water douches, boro-glyceride, cotton plugs. These remedies only relieved temporarily the excruciating pain; but at each menstrual epoch the same programme was to be gone through with. As much as twenty grains of sodium bromide was given three times daily to quiet the nervous irritation. The bowels were kept gently open with laxatives; reconstructive tonics were used; hygienic recommendations were not, however, strictly carried out with regard to keeping feet warm. The flow always began very scant after several days of pain in the back, the clots of blood being expelled mingled with membranous shreds. This usually lasted for two days, during which time the pain was intense, unless under the control of anodynes.

After so long a period of palliative treatment, she consulted me about some surgical procedure to relieve her during the time of her periods. I examined the ovaries carefully with no evidence of disease or displacement, but with slight tenderness. On examining the womb, I found the mouth plugged with viscid mucus, discharging a watery-looking secretion, pointing to inflammation within the womb.

After thoroughly irrigating the vagina and rectum, the patient was placed under the influence of ether, the womb pulled down by tenaculum, thoroughly dilated with Goodell's instrument. While dilated, I carefully curetted with blunt curette the granular surface, removing all the fungosities on both the anterior and posterior surfaces of the womb. I thoroughly irrigated the womb, packing it with a yard strip of 5 per cent. iodoform gauze. The patient was put to bed with orders for an ice bag to be placed over abdomen if fever rose or severe pain followed. After forty-eight hours I removed the gauze packing, thoroughly douching

the vagina with antiseptic solutions. These douches were kept up for four days; perfect quiet in bed with liquid diet was insisted upon.

During the operation I discovered a large internal hæmorrhoid, which I ligated and removed after thoroughly dilating the sphincter. The patient made an uninterrupted recovery, and now has her monthly period without any further trouble.

Proceedings of Societies, Boards, etc.

MEDICAL EXAMINING BOARD OF VIRGINIA.

The First Semi-Annual Meeting of the Ninth Annual Session commenced in Richmond, April 19th, 1893.

According to the new method of conducting the examinations, the chairmen of the different Sections had forwarded their list of questions for the different Sections to the local members of the Board, viz.: Drs. Hugh M. Taylor, Irving, Michaux and Harrison, who proceeded with the examination, which lasted three days. At the conclusion of this portion of the examination, the papers were all kept in the possession of the local members of the Board until the following week, April 25th, when the Board met to consider their merits.

Upon roll-call, at 8:30 P. M., April 25th, the following members answered to their names: Drs. S. W. Budd, A. Trent Clarke, J. W. Dillard, Paulus A. Irving, C. C. Conway, R. I. Hicks, W. L. Broadbush, Ben. Harrison, Jacob Michaux, R. S. Martin, H. M. Nash, A. C. Palmer, T. W. Simmons, Hugh M. Taylor, T. James Taylor, B. L. Winston, and Joseph T. Southall.

The minutes of the preceding meeting were read and proved.

Dr. Taylor declared the first business before the body the election of officers.

On motion, Dr. Hugh M. Taylor was unanimously re-elected.

Dr. Michaux declined to act longer as Secretary, and Dr. Benj. Harrison was elected to that office.

The appointment of the Executive Committee was left to the President.

A committee, consisting of Drs. Conway, Irving and Michaux, was appointed to revise the different Sections.

Various questions were argued as to the best method of conducting the examinations, which was concluded by a motion, which was carried, to the effect that the Executive Committee make what revision they think advisable in the new method of examinations.

Board then adjourned until the following Thursday at 9 o'clock; the intervening day to be consumed in a review of the applicants' papers.

Thursday, April 25th.—Board was called to order by the President, and immediately went into consideration of the percentages attained by applicants in tabulated result. Sixty-five applicants out of a total of eighty-six were awarded permits. After some little routine business the Board adjourned.

The following are the questions that were adopted for the recent examinations:

I.—SECTION ON CHEMISTRY.

Members:—Drs. P. B. Green, Wytheville, *Chairman*; A. C. Palmer,* Norfolk; Benj. Harrison,* Richmond; T. O. Jones, Harrisonburg.

Ques. 1. What is phosphorus? In what varieties does it exist, and what are the physical properties of each?

Ques. 2. What is the brick-dust deposit sometimes found in urine? Give the murexide test for its presence.

Ques. 3. In a case of poisoning by nitrate of silver, what chemical antidote should be used and what reaction would follow?

Ques. 4. Give synonym, source, composition and properties of carbolic acid.

Ques. 5. Give formula, preparation and physical properties of calomel and corrosive sublimate, with a test for detection of corrosive sublimate in calomel.

Ques. 6. What are alkaloids? Give their source, classification and constituents.

II.—SECTION ON ANATOMY.

Members:—Drs. H. M. Taylor,* Richmond, *Chairman*; Paulus A. Irving,* Richmond; R. D. Huffard, Kelly, Tazewell Co., Va.; Jos. T. Southall,* Jetersville.

* The * after the names of the Section men indicates the Examiners who were in attendance.

- Ques.* 1. Describe the petrous portion of the temporal bone.
- Ques.* 2. Describe the tendons and their relations in front of the ankle joint and behind the inner and outer malleoli.
- Ques.* 3. Describe the musculo-spiral nerve—its wayside and terminal branches.
- Ques.* 4. Describe the solar plexus and the distribution of its branches.
- Ques.* 5. Describe the duodenum and its relations.
- Ques.* 6. Describe the male perineum.

III.—SECTION IN HYGIENE AND MEDICAL JURISPRUDENCE.

Members:—Drs. O. B. Finney, Onancock, *Chairman*; J. W. Tankard, Burgess' Store; T. W. Simmons,* Martinsville; J. E. Chancellor, Charlottesville.

I.—*Hygiene.*

Ques. 1. On the arrival of a vessel from an infected district, or when the contagion has developed amongst the crew or passengers, what precautions should be taken and what rules enforced to prevent the spread of the contagion?

Ques. 2. *Food.*—Give classification and quantity of each necessary to maintain a healthy and vigorous condition of body?

Ques. 3. *Alcohol.*—Give its degenerative effects when habitually and intemperately used, on various organs and mind.

Ques. 4. *Air (Atmospheric).*—Name the impurities sometimes found and diseases caused or aggravated by such impurities.

II.—*Medical Jurisprudence.*

Ques. 1. State duties and obligations of a physician when summoned to hold coroner's inquest over a body suspected of being murdered.

Ques. 2. *Drowning.*—Give external and internal signs—difference in recent drowning—body that has remained some time in water; also difference in signs of body drowned or thrown in water after death.

IV.—SECTION ON PHYSIOLOGY.

Members:—Dr. Robert Glasgow, Lexington, *Chairman*; Drs. R. F. Young, St. Clair's Bottom; R. S. Martin,* Stuart, Patrick Co.; W. L. Broadus,* Bowling Green.

Ques. 1. Give meaning of tidal, reserve, complemental and residual air.

Ques. 2. Give composition of the blood, difference between the red and white corpuscles, and relative number of each.

Ques. 3. What is the normal temperature of man? Explain how this temperature is preserved in winter and summer, and in all latitudes.

Ques. 4. Describe gastric digestion in detail.

Ques. 5. Give description of nerve fibres, their course and physiological properties.

Ques. 6. Give origin, distribution and function of first pair of cranial nerves.

V.—SECTION ON MATERIA MEDICA.

Members:—Dr. C. C. Conway,* Rapidan, *Chairman*; Dr. A. Trent Clarke,* South Boston; S. W. Budd,* Petersburg; Jas. Parrish, Portsmouth; M. A. Douglass (Homœop.), Danville; — Young (Homœop.), Lynchburg.

Ques. 1. Give the physiological action of morphine, and compare its doses, effects and uses with those of codeine.

Ques. 2. Name the principal salts of sodium and potassium in general use; their physiological and therapeutic action.

Ques. 3. Describe senega, squill and valerian; their source, physiological and therapeutic action and dose.

Ques. 4. Give source and uses of nitrite of amyl and benzoin.

Ques. 5. Give the physiological action and therapy of the iodine and bromine compounds in general use.

Ques. 6. Give the general rule for dosage, with exceptions in each class—*i. e.*, of infusions, poisonous tinctures, poisonous solid extracts, and dilute acids.

Ques. 7. Give three examples where poisonous compounds would be found in prescribing incompatible drugs.

VI.—SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Members:—Dr. H. M. Nash,* Norfolk, *Chairman*; Drs. B. L. Winston,* Hanover C. H.; G. D. Meriwether, Buena Vista; H. M. Patterson, Staunton; George A. Tabor* (Homœop.), Richmond.

Ques. 1. Give the diameters of the female pelvis.

Ques. 2. Describe the fœtal circulation.

Ques. 3. Give management of a case of placenta prævia, and describe its complications.

Ques. 4. Describe the mechanism of labor in the L. M. P. presentation.

Ques. 5. Give the pathology and treatment of phlegmasia alba dolens.

Ques. 6. Give the diagnosis and treatment of pelvic cellulitis.

VII.—SECTION ON PRACTICE.

Members:—Dr. R. W. Martin, Chatham, *Chairman*; Drs. Bedford Brown, Alexandria; R. I. Hicks,* Warrenton; T. J. Taylor,* Walthall's Store; W. P. Jones (Homœop.), Petersburg.

Ques. 1. State the causes of acute parenchymatous nephritis, and give the symptoms of idiopathic cases.

Ques. 2. State the causes of pneumothorax.

Ques. 3. Give the symptoms (including physical signs) of hypertrophic lobar emphysema.

Ques. 4. Describe the morbid anatomy of tubercular meningitis.

Ques. 5. Describe the disorders of the stomach due to chronic alcoholism.

Ques. 6. Give the symptoms of Asiatic cholera.

Ques. 7. Give the symptoms of stomatitis, with treatment.

VIII.—SECTION ON SURGERY.

Members:—Drs. J. W. Dillard,* Lynchburg, *Chairman*; J. Michaux,* Richmond; Leigh Buckner, Roanoke; W. P. McGuire, Winchester, Va.

Ques. 1. Etiology, diagnosis and treatment of appendicitis.

Ques. 2. Differentiate between concussion, compression, shock, alcohol and opium poisoning.

Ques. 3. Etiology, symptoms and treatment of prostatic hypertrophy, acute and chronic.

Ques. 4. After wounds of the extremities, what are the indications for amputation?

Ques. 5. Give pathological changes and process of repair after necrotic burns.

Ques. 6. Diagnosis and treatment of sacro-iliac disease.

ALPHABETICALLY ARRANGED LIST OF THE APPLICANTS FOR EXAMINATION TO
WHOM LICENSES WERE GRANTED TO PRACTISE MEDICINE IN VIRGINIA,
AFTER DUE EXAMINATION APRIL 19TH, 20TH AND 21ST, 1893, WITH
THEIR POST-OFFICES, COLLEGES AND YEARS OF GRADUATION.

- J. J. Anderson, Hopeful, Louisa Co., Va., Med. Col. Va., 1893.
Herbert L. Atkins, Richmond, Med. Col. Va., 1893.
O. C. A. Bindewald, Portsmouth, Va., University of Virginia, 1892.
W. S. Beazley, Stanardsville, Va., Med. Col. Va., 1893.
D. P. Bowman, Greenville, Augusta Co., Va., University of Penn., 1887.
J. H. Boyle, Mechanicsburg, Bland Co., Col. Phys. & Surg. Balt., 1893.
E. W. Branch, Gun's Hill, Dinwiddie Co., Va., Med. Col. Va., 1892.
W. S. Briggs, Richmond, Va., Kentucky School Med., 1890.
R. W. Brown, Hollins, Roanoke Co., Va., Univ. of N. Y., 1889.
J. D. Burwell, Chula, Amelia Co., Va., Leonard Med. Col., 1893.
F. H. Beadles, Richmond, Va., non-graduate.
G. H. Carter, Boydton, Va., Med. Col. Va., 1893.
F. W. Chapin, Hot Springs, Va., Bellevue Hosp. Med. Col., 1879.
R. E. Caldwell, Wytheville, Va., non-graduate.
B. L. Carter, Sweet Chalybeate Springs, Va., Balt. Med. Col., 1893.
E. L. Crumpler, Hanson's, Southampton Co., Va., Med. Col. Va., 1893.
W. L. Deavenport, Lindell, Wash. Co., Va., Col. Phys. & Surg. Balt., 1893.
P. O. Dillard, Spencer, Henry Co. Va., Col. Phys. & Surg., Balt., 1893.
C. N. Dunlap, Middlebrook, Va., Col. Phys. and Surg., Balt., 1893.
W. E. Driver, Driver's, Nansemond Co., Univ. of Md., 1893.
C. A. Easley, Bluefield, W. Va., Med. Col. Va., 1893.
G. C. Eggleton, Richmond, Va., Med. Col. Va., 1893.
A. B. Evans, Churchview, Middlesex Co., Va., non graduate.
J. H. Dunkley, Stuart, Patrick Co., Va., Col. Phys. & Surg., Balt., 1892.
A. W. G. Farrar, Richmond, Va., Leonard Med. Col., 1893.
E. B. Ferebee, Norfolk, Va., Col. Phys. & Surg., Balt., 1885.
H. R. Finter, Luray, Va., Louisville Med. Col., 1891.
J. H. Fore, Bayview Asylum, Balt., Col. Phys. & Surg., Balto., 1886.
A. M. Foster, Portsmouth, Va., Mich. Col. Med. & Surg., 1891.
D. F. Gill, Greensmount, Rockingham Co., Col. Phys. & Surg., Balt., 1893.
L. Gwathmey, Norfolk, Va., Univ. Va., Col. Phys. & Surg. N. Y., 1889.
S. S. Guerrant, Sloan Hosp., N. Y., Tulane Univ., N. O., 1891.
W. L. Harris, Joyville, Brunswick Co., Va., Med. Col. Va., 1893.
H. B. Haddox, Flint Hill, Rappahannock Co., Univ. of Md., 1893.
J. R. Hicks, Warrenton, Va., University of Maryland, 1893.
T. P. Hope, Hampton, Va., Med. Col. Va., 1893.
S. C. Hughes, Stuart, Patrick Co., Va., Col. Phys. & Surg., Balt., 1891.
J. S. Horsly, Lowesville, Amherst Co., Va., Univ. of Va., 1892.
W. T. Jones, Norfolk, Va., Western Reserve Med. Col., Cleveland, 1893.
Sarah G. Jones, Richmond, Va., Howard Med. Col., Wash. D. C., 1893.
E. R. Jefferson, Richmond, Va., Leonard Med. Col., Raleigh, N. C., 1893.
J. C. King, Spencer, Henry Co., Va., Col. Phys. & Surg., Balt., 1893.
Southgate Leigh, Norfolk, Univ. of Va. and Phys. & Surg., N. Y., 1888.
R. R. Lee, Crawford, Franklin Co., Va., Col. Phys. & Surg., Balt., 1893.
T. R. Marshall, Bedford City, Va., Col. Phys. & Surg., Balt., 1893.
P. J. McElrath, Newport, Giles Co., Va., Col. Phys. & Surg., Balt., 1893.
S. W. Maphis, Charlottesvile, Va., Univ. of Md., 1893.
St. Julien Oppenhimer, Richmond, Va., Med. Col. Va., 1893.
L. P. Preston, Lynchburg, Va., Univ. of Va. and Jeff. Med. Col., 1887.
J. W. Preston, Glade Hill, Franklin Co., Col. Phys. & Surg., Balt., 1893.
C. H. Ross, Elamsville, Patrick Co., Va., Col. Phys. & Surg., Balt., 1893.
J. A. Rucker, Moneta, Bedford Co., Va., Univ. of Louisville, 1893.
C. R. Shumate, Bluff City, Giles Co., Va., Col. Phys. & Surg., Balt., 1893.
R. C. Smith, Middleburg, Loudoun Co., Va., Univ. of Maryland, 1881.
P. B. Stickly, Strasburg, Va., Medical College of Virginia, 1893.
W. P. Stone, Sydnorsville, Franklin Co., Col. Phys. & Surg., Balt., 1893.

E. B. Stone, Roanoke, Va., Medical College of Virginia, 1893.
 B. W. Switzer. Mt. Crawford, Rockingham Co., Va., Col. Phys. & Surg., Balt., 1893
 R. E. L. Taliaferro, Madison Mills, Madison Co., Va., Univ. of Md., 1893.
 E. R. Torry, Torry's Mill, Mecklenburg Co, Va, Univ. of Md., 1893.
 E. A. Turman. O'Neal. Floyd Co, Va., Med. Col. Va., 1893.
 W. J. West, Richmond, Va., Med. Col. Va., 1893.
 A. L. Winslow, Chula, Amelia Co., Leonard Med. Col., 1893.
 A. D. Wood, Turtle Rock. Floyd Co, Col. Phys. & Surg., Balt., 1893.
 O. C. Wright, Pullen's, Pittsylvania Co., Col. Phys. & Surg., Balt., 1893.

Nos. of examination papers.	LIST OF INSTITUTES Whose Graduates were Re- jected by the Med. Exam. Board of Va., at its Regular Spring Session, April 19, 20, 21, 1893, With Percentage Marks re- ceived in each Section.											Average percentage	Remarks.
	COLLEGE OF GRADUATION.	Chemistry.	Anatomy.	Physiology.	Hygiene and Med. Jurisprudence.	Material Medica and Therapeutics.	Obstetrics and Gynecology.	Practice.	Surgery.	Aggregate.			
13	College Phys. and Surg., Balt.	61	45	78	80	80	85	78	78	585	73	.....
20	Medical College of Virginia...	76	42	57	95	65	78	95	75	583	72	.....
29	Medical College of Virginia...	80	33 $\frac{1}{2}$	59	55	66	83	98	70	544	68	.....
32	Tennessee Medical College....	57	75	49	75	73	70	60	70	539	67	.....
41	Baltimore Medical College.....	71	33 $\frac{1}{2}$	60	90	65	60	75	63	517	64	.....
53	Baltimore Medical College....	65	26	57	85	35	64	60	76	468	58	.....
62	Howard Univ., Wash'n, D. C....	42	33 $\frac{1}{2}$	55	85	67	74	48	73	479	59	.....
65	College Phys. and Surg., Balt.	69	33 $\frac{1}{2}$	56	75	72	83	85	75	548	68	.....
67	Non-Graduate.....	56	50	56	75	50	77	77	65	506	63	.....
69	College Phys. and Surg., Balt.	74	15	57	90	54	66	95	82	533	66	.....
70	Non-Graduate.....	64	24	43	45	36	62	27	70	364	45	.....
72	Chattanooga Med. Col., Tenn	50	21	70	90	30	78	76	70	485	60	.....
73	Michigan Col. of Med. & Surg.	72	43	60	95	66	76	80	75	567	70	.....
76	Baltimore Medical College....	75	33 $\frac{1}{2}$	72	70	68	84	80	75	557	69	.....
80	University of Maryland.....	74	42	70	85	63	67	64	76	541	67	.....
81	University of Maryland.....	40	62	50	60	64	67	96	81	520	65	.....
82	University of Vermont.....	20	8	20	65	48	50	64	65	340	42	.....

INSTITUTION REPRESENTED BY THE APPLICANTS
 WHO CAME BEFORE THE
 MEDICAL EXAMINING BOARD OF VIRGINIA,
 IN SESSION AT RICHMOND, VA.,
 April 20, 21, 22, 1893.

	Total Number Applicants from each College.	Total number Applicants Licensed from each College.	Total Number Applicants Rejected from each College.	Withdrawals.
Medical College of Virginia.....	19	15	2	2
University of Virginia—Medical Department.....	2	2		
Howard University Medical Dept., Washington, D. C. .	2	1	1	
University of Maryland—School of Medicine.....	9	7	1	1
College Physicians and Surgeons, Baltimore.....	22	19	3	
Baltimore Medical College.....	5	2	3	
Baltimore University—School of Medicine.....	1		1	
Jefferson Medical College and University of Virginia.....	1	1		
University of Pennsylvania—Medical Department.....	1	1	1	
University of City of New York—Medical Department.	1	1		
Bellevue Hospital Medical College, New York.....	1	1	1	
College Phys. and Surg., N. Y., and University of Va....	2	2		
University of Vermont, Burlington.....	1		1	
Louisville Medical College.....	1	1		
Kentucky School of Medicine, Louisville.....	1	1		
University of Louisville—Medical Department.....	1	1		
Leonard Medical College, Raleigh.....	4	4		
Tulane University, New Orleans.....	1	1	1	
Michigan College of Medicine and Surgery.....	2	1	1	
Tennessee Medical College, Knoxville.....	1		1	
Chattanooga Medical College.....	1		1	
Western Reserve Medical College, Cleveland.....	1	1		
Non-Graduates.....	6	3	2	1
Totals.....	86	65	17	4

INSTITUTIONS REPRESENTED BY THE APPLICANTS
BEFORE THE
MEDICAL EXAMINING BOARD OF VIRGINIA,
FROM THE ORGANIZATION OF THE BOARD,
January 1st, 1885, to April 22d, 1893.

	Total Number from each Institution.	Total Number Licensed First Exam.	Total Number Rejected First Exam.	Awarded on Second Examination.	Rejected Second Examination.	Rejected Third Examination.	Licensed Third Examination.	Incomplete or Withdrew.
Medical College of Virginia	116	92	18	5	2			6
University of Virginia—Medical Department.....	67	66	1					
College of Physicians and Surgeons, Baltimore.....	95	72	20	4	2			3
University of Maryland, School of Medicine.....	106	77	28					1
Baltimore Medical College.....	20	6	12	2	3			2
Baltimore University—School of Medicine.....	6		6		1			
Washington University, Baltimore, (Extinct.).....	1							1
National Medical College, Washington, D. C.	1		1					
University of Georgetown, D. C., Medical Department	1		1					
Howard Univ. Med Dept., Washington, D. C. (Colored)	20	5	15		4	1		
University of Maryland and Baltimore Medical Coll..	1		1					
Georgetown College, Washington, D. C.	1		1					
Jefferson Medical College.....	29	20	8	2				1
Jefferson Medical College and University of Virginia.	1		1					
University of Pennsylvania—Medical Department.....	7	7						
Medico-Chirurgical College of Philadelphia.....	1		1		1	1		
Medical College of Philadelphia	1		1					
Woman's Medical College of Pennsylvania.....	1		1					
Hahnemann Med. Coll. and Hosp. (Homœop.) Phila..	3	2	1					
University of the City of New York—Medical Dept..	25	17	8		1			
University of New York.....	1		1					
University of Virginia and New York.....	1	1						
Bellevue Hospital Medical College, New York.....	15	14	1	1				
University of Va. and Bellevue Hospital Medical Coll.	1	1	1					
College of Physicians and Surgeons, New York.....	9	8	1					
Geneva Medical College, New York (extinct).....	1	1						
Coll. Phys. and Surg., New York, and Univ. of Va....	2	2						
Long Island College Hospital, Brooklyn.....	1		1					
Yale Medical School, New Haven.....	1	1						
University of Vermont, Burlington.....	2	1	1					
Miami Medical College, Cincinnati.....	2	2						
Cincinnati Medical College.....	1		1					
Columbus Medical College.....	3	2	1	1				
Homœopathic Hospital College, Cleveland.....	2	2						
Pulte Medical College, Cincinnati (Homœopathic).....	1	1						
Louisville Medical College.....	11	5	6					
University of Louisville—Medical Department.....	9	6	3					
Kentucky School of Medicine, Louisville.....	4	4						
Hospital Medical College, Louisville.....	7	4	3					
Vanderbilt University, Nashville.....	5	4	1	1				
University of Tennessee, Nashville.....	1	1						
University of the South, Sewanee, Tenn.....	1		1					
Leonard Medical College, Raleigh (Colored).....	11	9	2					
Medical College of State of South Carolina, Charleston	2	2		1				
Southern Medical College Atlanta.....	3	1	2					
Atlanta Medical College.....	1		1					
Tulane University—Medical Dept.—New Orleans.....	2	2						
University of Louisiana (probably Tulane University)	1	1						
Medical College of St. Louis (closed).....	1	1						
St. Louis Medical College, Missouri.....	1	1						
Detroit Medical College, Michigan.....	2	2		1				
University of Michigan—Medical Dept., Ann Arbor...	2	2						
Michigan College of Medicine and Surgery, Detroit...	2	1	1					
Chicago Homœopathic Medical College.....	1	1						
Hannemann Medical College and Hospital, Chicago...	1	1						
University of Heidelberg, Germany.....	1	1						
St. George's Hospital, London.....	1	1						
King George Hospital, London.....	1		1					
King College, London.....	1		1					
Tennessee Medical College, Knoxville.....	1		1					
Chattanooga Medical College.....	1		1					
Western Reserve Medical College, Cleveland.....	1	1						
Rush Medical College, Chicago.....	1	1						
Colleges unknown.....	7	4	1					2
Non-Graduates.....	51	18	27		1			6
Totals.....	680	476	182	18	15	2		22

Analyses. Selections, etc.

Construction of the Code of Ethics—National Quarantine—National Public Health Department.

Dr. S. Stringer, of Jacksonville, Fla., in his "Annual Address" as President of the Florida Medical Association, last April, among other good things, spoke as follows regarding several points of general interest:

You are, perhaps, more interested in this matter than first impressions indicate, because the law in this State has legalized the practice of medicine by persons with whom we, as regular physicians, cannot, under the Code, meet in that cordial co-operation so desirable by those whose life service is devoted to the relief and cure of suffering humanity.

We, as regular practitioners of scientific medicine, being, to some extent, custodians of the health of our people, should so construe our code of ethics and moral government as not to conflict with the interest of our patients who may have, from any cause or emergency, sought professional aid from other legal practitioners, with whom we are not, and with whom our Code prevents that free and full amity, so desirable in the sick chamber. The function of the Government being to secure citizens their rights of liberty, life, and pursuits of happiness, and health being indispensable to the full enjoyment of these great privileges, it follows that the State cannot thrust aside the duty of protecting the citizens from impostors of every class, and especially those who pretend to administer to the wants of the sick in accordance with prescribed dogmas or rules of sects, cliques, "pathies," or "isms."

Since our last annual meeting, there has been a National assumption of quarantine supervision. It is a National obligation to protect our seacoast line from invasion. And it is eminently proper for the National Government to assume that duty and relieve the States of so heavy an expense and responsibility. Furthermore, by having a uniform Quarantine Service, with liberal provision for its execution, our protection from imported contagious diseases will certainly be more effective, on our fifteen hundred miles of seacoast, than the financially embarrassed State could possibly give us.

The passage of this law, it seems to me, must necessarily contemplate the creation of a *Public Health Department, with a Secretary of Public Health*. But should Congress continue

to refuse to dignify that great and important interest of the citizens of the United States, the Public Health, with a Department, would it not be well to petition this body to create a Bureau of Health, or to refer that part of the Nation's interest to the Bureau of Animal Industry? The requirement for a Cabinet Officer of Public Health, who will be authority on all subjects pertaining to the physical as well as mental status of the people, is most important. Our extensive line of seacoast, and our already intimate commercial intercourse with tropical countries, to be more than duplicated by increased facilities rapidly approaching completion, awaken in our State an interest in national quarantine protection and public hygiene not exceeded by any State in the Union. We should therefore use our influence with the Florida Congressional delegation to urge the creation of a Public Health Department.

Fibroid of Cervix Uteri Complicating Labor—Forcible Delivery—Septicæmia—Laparotomy.

At the meeting of the Tennessee State Medical Society in Nashville, on April 12th, Dr. T. J. Crofford, of Memphis, Tenn., reported a case at some length, in which a fibroid tumor complicated delivery. The woman, a primipara, was six months pregnant, and had been in labor six days. The uterus could not empty itself on account of the fibroid growth encasing the whole cervical canal, preventing its dilatation. An arm of the tumor also projected in front of the mouth of the uterus, mechanically interfering with the passage of the contents of the organ. The pregnant uterus was high up in the abdomen and occupied the left side. The tumor was lower down, and to the right of the median line. The diagnosis was of course obscure. The case was seen one hundred miles away, in the country. The Doctor was sent for for the purpose of doing a Cæsarean section, which would have required the supplement of a Porro, owing to the presence of sepsis. The poor equipment at hand caused him to remove the patient to his private Sanitarium, in Memphis. Arrangements were made for the operation, but the woman was so extremely exhausted that the Doctor concluded to make a desperate attempt at delivery from below before subjecting so weak a woman to so formidable an operation.

She was anæsthetized and placed in the lithotomy position. By making great pressure upon the vaginal portion of the tumor, the Doctor finally succeeded in somewhat

pushing it aside; then, by means of traction upon the womb, it was brought somewhat lower. The cervical canal was forcibly dilated in spite of the surrounding band of the fibroid growth. The hand was next introduced, and one foot of the foetus grasped, and the delivery proceeded with. A trained assistant using the Crede method upon the outside, the placenta was finally delivered. Under hypodermics of strychnia and other stimulants, the patient was rallied, became more comfortable, and, for a time, progressed more favorably. The sepsis, however, continued in spite of daily uterine irrigations.

Seventeen days later, although the patient was quite weak, the abdomen was opened with the idea of removing the offending growth, and, if necessary, the uterus as well. It was after the abdomen was laid open that the diagnosis was made, and the relation of the uterus and tumor was first fully understood. The adhesions were so great, however, that it was not thought that the patient could stand the breaking up of these with the addition of a hysteromyectomy. The uterine appendages were removed, hoping to cause a shrinkage of the tumor. The condition of the patient did not seem to be made worse by the operation. The uterine irrigations were kept up. Six days later, septic symptoms became still more formidable, the temperature going as high as 106 deg., and the pulse to 145 beats per minute. Upon investigation, the vaginal portion of the tumor, as well as the interior of the uterine canal, was found to be in a sloughing condition.

The patient was again anæsthetized and placed in the same position as before, when the Doctor, by means of a knife and scissors, removed large sections of the lower portion of the tumor, seared it with a thermo-cautery; then curetted and irrigated the uterine canal, and packed the same with gauze. For three days, she improved. This procedure was gone through with some half dozen times at intervals of three days until almost the whole tumor and a large portion of the uterus were removed. The patient finally made a complete recovery.

The Doctor further stated that whilst this case teaches that it is not wise to apply the popular radical measures of the day to all such cases, irrespective of the conditions existing, yet he emphasizes that the fact of the successful termination of this case should not be construed as a superiority of the measures adopted over the Porro operation. On the contrary, he had no doubt that the Porro operation in

this class of cases, in the hands of an experienced operator, offers safety beyond the measures here adopted, and it would have gladly been utilized in this case had the patient been seen in time, or had her condition, at any time thereafter, justified it. The measures adopted, as above given were the only ones that, in his opinion, offered any reasonable hope of a successful termination in this particular case.

Case of Traumatic Empyema.

Dr. N. T. Dulaney, of Bristol, Tenn., reported the following case before the Tennessee State Medical Society at its recent session :

On August 19th, 1891, Mr. E. G., aged 30 years, unmarried, conductor on a freight train on the Norfolk and Western railroad, received a pistol wound in the left chest, the ball entering at a point about five inches below the nipple, one and a half inches outside nipple line, at seventh or eighth intercostal space. The ball could not be located for several weeks.

The Doctor saw the patient the first time on September 17th, with the attending physician, Dr. M. M. Butler, of Bristol, Tenn. He found temperature of patient not very high, from 99° to 102° ; pulse 90 to 100, and not strong; little pain, no cough, nor had there been any; no bloody expectoration, indicating wound of lung; little appetite, bowels torpid, breathing somewhat hurried, more pronounced on right side; patient considerably emaciated. Physical examination revealed extensive dullness over a large portion of left chest, amounting to flatness, with absence of normal respiratory sound, and increased percussion resonance, and exaggerated respiratory murmur on the right side. He saw patient again on September 29th, when, in addition to symptoms mentioned, he found a prominence on back as large in circumference as the mouth of a teacup, over the 8th and 10th ribs, to the left of the spine. On cutting through the ribs, there was a gush of a very offensive dark mixture of pus and serum amounting to about a quart. The ball was found outside the chest, under the deep muscles of the back, having broken a rib (9th or 10th) near the spine on left side in its passage. A portion of same rib, one inch long, broken but not detached, was found hanging loosely on the chest in such way as to obstruct the opening in the chest-wall. On removing this, the opening was at once filled with a mass of dead tissue, forcing its way out. This was drawn out to the extent of a double-handful.

It was a stinking mass of dead tissue, which he thought was pleura, and lung and connective tissue. It was dark, almost black, thickly set with small ash-colored spots. This removed, the cavity was washed out with a weak, warm carbolized water, and the wound dressed with iodoform gauze cotton and bandaged, and a hypodermic of morphine given.

Fever declined regularly on using an enema the next day. The water used passed out freely and promptly through the opening in the back. For three or four months faecal matter passed out through this opening in the back, sometimes (if thin) in large quantity. The cavity was washed out daily with weak carbolized water for several weeks, and the patient improved; the fistula healed, and he is now on duty as conductor, weighing 193 pounds.

The Doctor said: This is an interesting case from the beginning. Because—

1st. There were no rational signs pointing to injury of the lung; no blood expectorated, no cough, and at no time was there any of the characteristic sputa of pneumonia. The case went on for seven weeks, the chest filling with serum and pus, and a large amount of tissue dying within the chest; yet, aside from the physical signs and the altered breathing, there was nothing to indicate the exact nature of the case. It is true the persistent fever, emaciation, loss of appetite, restlessness and failing strength indicated something seriously wrong, but it remained for the physical examination to differentiate it.

2d. The ball in its passage had so damaged the diaphragm and the bowel at some point in contact with it, as to lead to inflammatory adhesion, followed by sloughing, and resulting in faecal fistula. And with all this there was no bloody or mucous discharges from the bowels; and no symptoms indicating injury of the bowel, till the water injected into the rectum was seen to pass out through the wound in the back.

In regard to the management of this case, the Doctor said, that while no new principle is involved, the result forcibly emphasizes the two or three main points in the local treatment of such cases to-day, whether of idiopathic or traumatic origin; namely, cleanliness (or antisepsis, if you please,) with thorough drainage. These given, unless your patient is exhausted from protracted disease or septicæmia, or some undermining constitutional disease, you are warranted in making a favorable prognosis in most cases.

It is astonishing how promptly convalescence begins after

the inauguration of such treatment, if not too long delayed; or if the ordinary "*vis medicatrix naturæ*" is present to assist you. Of course constitutional treatment, based on general principles, is not to be neglected.

In conclusion, he said that the distance from the point of entrance of the ball, to the point where it was cut out, around the chest is $8\frac{1}{4}$ inches.

Treatment of Inebriety.

In a paper by Dr. Edward C. Mann, of Brooklyn, N. Y., before the American Association for the Study and Cure of Inebriety, March 23rd, 1893, he recommended the following as a good tonic and sedative in dipsomania, having a good effect on the stomach, and tending to antagonize both the degenerative changes in the brain and the effects of alcohol on the structures of the body:

R_y.—Quiniæ sulph.....grs. ij.
 Zinc oxide..... grs. ij.
 Strychnia sulph.gr. 1-40
 Arsenicgr. 1-100
 Capsicum.....grs. ij.

M. et ft. pill No. 1. Sig.—One three times a day.

Together with this pill, Dr. Mann uses, for sixteen days, the following hypodermatic dosiometry:

R_y.—Strychnia nitrat.....gr. j.
 Aquæ dest..... $\bar{3}$ ss.

M.—Eight minims daily for eight days; 4 minims daily for another eight days. To quiet the morning nausea of alcoholics, two or three drops of wine of ipecac on the tongue, fasting.

The patient is kept in bed for the first few days, and fed on milk and meat-juice for nourishment. Hydrotherapy and electrotherapy are employed. To induce sleep, the following sedative is administered at night for a few days:

R_y.—Tr. opii deod. }
 Ex. hyosey. fld. }
 Chloral hydrat. } $\bar{a}\bar{a}$ $\bar{5}$ ij.
 Pot. bromid. }
 Tr. capsici..... $\bar{5}$ ss.
 Tr. aconit. rad.....m. v.
 Aquæ menth. pipad $\bar{3}$ iv.

M. et Sig.—Two tablespoonfuls at bedtime for a few days only, freely diluted with water.

If the patient is very much excited, and is bordering on delirium tremens, the following is useful for two or three nights:

R_x.—Hyoscin. hydrobromat.....gr. j.
 Aquæ dest.....3 ix.
 Spt. vini rect.....3 j.

M. et ft. hypodermatic solution. Sig.—Dose from 5 to 10 minims *pro re nata*.

The diet table of Dr. Mann consists of milk, eggs, oysters, meats, fish of all kinds, buttermilk, and koumiss, plus a minimum amount of the cereals; vegetables and starchy foods allowed only very sparingly, the idea being to rely on a diet which requires the least vital force and oxygen to digest, assimilate and appropriate, and to have ingested into the body such material as will, when brought under the influence of oxidation, yield energy, which is the expression of vital activity, and give the largest working power for the amount of food taken. By such a plan of treatment patients are sent out with restored health, the craving for alcohol gone, the lost will-power restored, the shattered nervous system built up, and, with a concentration of energy, physical ability and mental activity obtainable by no other plan of treatment.

To render Dr. Mann's pill available, Parke, Davis & Co, have added it (Pil. Dipsomania, Dr. Mann,) to the list of gelatin-coated pills, which they supply in bottles of 100 or 500.

Necessity for a Medical Examining Board in Georgia.

Dr. L. B. Grandy, of Atlanta, read a paper on this subject before the Georgia Medical Association, and said that the establishment of such a board is demanded in the interest of the people. People cannot always use proper discrimination in the selection of their doctor, and therefore the State should protect them by the passage of such laws as will exclude the incompetent and dishonest. The possession of a diploma is no guarantee of professional fitness, and should not constitute a license to practice. This is giving too much latitude to the medical schools to do inferior work. The existence of these boards has been a great stimulus to medical education. Now that the schools know that their graduates will have to appear before some examining board, they are making better effort to make them meet the requirements. In this respect the Southern colleges are not doing their duty. Men are graduated every year who are

unqualified to practice medicine. They are excluded from those States that are protected by suitable legislation, and they quickly take refuge in those that are not. Similarly with the quacks. Thus there are about 700 physicians in Georgia who would have been rejected in other States. It is time a protest were being made. Every effort would be made to defeat the bill now pending before the Legislature. The opposition consists mainly of the eclectics, homœopaths, one regular, and two lawyers, one of whom is representing a peripatetic quack doctor from Boston. It will be alleged that the bill is unconstitutional. In reply to this, Dr. Grandy quoted several supreme court decisions to the effect that such attempts at the regulation of medical practice are not unconstitutional. He said also that these boards are operating successfully in twenty-four States, one Territory, and even among the Cherokee and Choctaw nations. They have demonstrated their usefulness wherever they have been tried. The people know that they bring protection, and would not do without them. He made an argument for the bill now pending as being fair and impartial and free from reasonable objection. The selection of the board is to be entrusted to the Governor, with no restrictions, except that the different schools are to be represented approximately in proportion to their numerical strength in the State. The bill sought to protect the people from illegal and incompetent practitioners. It sought to secure for the people only such physicians as are competent to practice their profession. They are at least entitled to that much.

Book Notices.

Text-Book of the Theory and Practice of Medicine by American Teachers. Edited by WILLIAM PEPPER, M. D., LL. D., Provost and Professor of Theory and Practice of Medicine, etc., University of Pennsylvania. *In Two Volumes. Illustrated.* Vol. I. Philadelphia: W. B. Saunders. 1893. Large 8vo. Pp. 909. Cloth, \$5.00; Leather, \$6.00; Half Russia, \$7.00. (For sale by subscription only.)

Professors of deserved distinction in medical schools of Boston, New York, Philadelphia, Baltimore, Washington, Cincinnati, and Chicago, have united their labors in this Volume I, so as to make it a book of very great value. The

most advanced of scientific lessons are everywhere presented; while each author, in the preparation of his respective article, has kept constantly in view the practical need of the profession. The Sections on Symptomatology, Diagnosis and Treatment, are especially full, while many formulæ are admitted in their respective places throughout the volume. Volume I treats of hygiene, the usually described fevers—including even an article on “Mountain Fever”—various constitutional diseases, some diseases of the brain and nervous system, etc. Volume II will soon be issued, so that Colleges can arrange to use the work as their text-book on the opening of their sessions next autumn. We most heartily recommend the work as a most excellent practitioners’ “text-book.”

Diagnosis by the Urine. By ALLARD MEMMINGER, M. D., Professor of Chemistry and of Hygiene in Medical College of the State of South Carolina, etc. *Illustrated.* Philadelphia: P. Blakiston, Son & Co. 1892. Cloth. 12mo. Pp 77. \$1. (From Publishers.)

Of the many small handy treatises that have recently been issued with the expressed purpose of meeting the want of the general practitioner in diagnosing diseases by means of the urine, this little volume, in our opinion, most nearly fills the place. Its chemistry, of course, is accurate, but not confusing by minutiae. The microscopical illustrations are well made; and the descriptive portions of the text are such that the practitioner will readily recognize. It is a first-rate book—suggestive, instructive, and useful clinically.

Elementary Physiology for Students. By ALFRED T. SCHOFFIELD, M. B., M. R. C. S., etc.; Author of “Physiology for Schools,” etc. *With Two Colored Plates and Other Illustrations.* Philadelphia: Lea Brothers & Co. 1892. 12mo. Pp. 372. Cloth. \$2.

The author has adopted a most useful idea in presenting for the student’s course the essentials of physiology—omitting disputed, over-much detail and confusing technicalities. An examination of the work shows that if the student masters what is taught in it, he would be considered amply qualified to pass examinations by boards of medical examiners and to enter upon the practice of medicine anywhere. Excellent drawings and plates illustrate the text, and we most cordially commend the volume as a good college text-book.

System of Diseases of the Ear, Nose, and Throat. Edited by CHARLES H. BENNETT, A. M., M. D., Emeritus Professor of Otolology in Woman's Medical College of Pennsylvania, etc. Vol. I. Illustrated. Philadelphia: J. B. Lippincott Co. 1893. Imperial 8vo. Pp 789. Per Volume, Cloth, \$6; Sheep, \$7; Half Russia, \$7.50. (For sale by Subscription only. Address Publishers.)

Volume I of this magnificent System, to be completed in *two volumes*, is so perfect in arrangement, selection of authorship, description, and details of diagnosis and treatment of diseases of the ear, and some of the diseases of the nose and naso-pharynx, as to justify the belief that when Volume II is issued, it will take the lead of the best works on the subjects. Special care has been taken to make each Section thoroughly practical; and all that can be done by the engraver's art has been introduced to illustrate the already well-written text. We were glad to see proper recognition given Dr. Joseph A. White's palate retractor, in the chapter on "Methods of Examination," etc., wherein it is spoken of as "the best" of palate retractors, and Bartlett, Garvens & Co., of Richmond, are recommended as the most accurate makers of this instrument. The relations of the special diseases under consideration in the different chapters to general diseases, and *vice versa*, are so fully and well discussed as to make the *System* of great utility to the general practitioner, for it must be a standard with the specialist.

Diet for the Sick. By Miss E. HIBBARD, Principal of Nurses Training School, Grace Hospital, Detroit, and Mrs. EMMA DRANT, Matron of Michigan College of Medicine Hospital, Detroit. To which has been added *Complete Diet Tables for Various Diseases and Conditions, as given by the highest Authorities.* Detroit: The Illustrated Medical Journal Co., Publishers. Paper, 74 pages. Price, post-paid, 25 cents; six for \$1.00.

This is a worthy supplement to any cook-book, as it deals only with the dishes suitable for the sick and convalescent; the receipts being favorite ones in use daily in the hospitals wherein the authors are employed. To this has been added the various authorized diet tables for use in anæmia, Bright's disease, calculus, cancer, chlorosis, cholera infantum, constipation, consumption, diabetes, diarrhœa, dyspepsia, fevers, gout, nervous affections, obesity, phthisis, rheumatism, and uterine fibroids. It also gives various nutritive enemata. The physician can use it to advantage in explaining his orders for suitable dishes for his patient, leaving the book with the nurse.

Mineral Springs and Health Resorts of California, with a *Complete Chemical Analysis of Every Important Mineral Water in the World. Illustrated.* By WINSLOW ANDERSON, M. D., M. R. C. P., London, M. R. C. S., Eng., Assistant in Chair of Medical Chemistry and Materia Medica and Teacher of Medicine and Chemistry in the Laboratories of University of California, etc. San Francisco: The Bancroft Co. 1892. Large 8vo. Pp. 384.

This work is practically the Prize Essay of the Medical Society of the State of California, to which the Prize was awarded April, 1889. The title states the scope of the volume; and, as it well deserved the Prize awarded, it is a valuable work for the general practitioner who is in search of health resorts for his invalids, etc. Such an essay as this points out a way in which many of the State Medical Societies may render their States a great deal of service. For while California may rightfully boast of wonderful things, it is plain that there are millions of people who cannot enjoy the benefits of residence or visits to that State. Nearer home are many springs and health resorts whose established virtues could be made serviceable to the people of the Atlantic belt if the same industry was put forth by the respective State Societies to make them more generally known. Pennsylvania, Virginia, West Virginia, North Carolina, Georgia, and Alabama, especially, are peculiarly rich in mineral springs and valuable health resorts, which could be serviceably studied by medical organizations, and their scientific lessons scattered broadcast over the world. We hope this suggestion will result in good.

Introduction to Diseases of the Skin. By P. H. PYE-SMITH, M. D., F. R. S., F. R. C. P., Physician to Guy's Hospital. Philadelphia: Lea Brothers & Co. 1893. Small 8vo, Pp. 408. Cloth.

This hand-book is practically a revision to date of the chapters on dermatology, written in 1886, to complete the unfinished work on medicine by the late Dr. Hilton Fagge. The diagrammatic illustrations introduced are of special service in aiding the remembrance of the local distribution of diseases of the skin. Subjects are considered chiefly from the pathological, diagnostic, and therapeutic standpoints—basing descriptions, therapeutic advice, etc., chiefly upon the observations of the author. The Appendix of Formulæ is a very useful addition to this edition. The chapter on diagnosis of skin diseases is the last instead of one of the first chapters in the book.

Elements of Human Physiology. By ERNEST H. STARLING, M. D., Lond., M. R. C. P., Joint Lecturer on Physiology at Guy's Hospital, etc. *With 100 Illustrations.* Philadelphia: P. Blakiston, Son & Co. 1892. 12mo. Pp. 437. Cloth, \$2. (For sale by West, Johnston & Co., Richmond.)

Such has been the progress in the science of physiology during the past few years, that a new book that brings it up to date is needed. While the book under notice is intended to teach the elements, a reading of them as here set forth will show the graduate of years ago that he has much to learn anew. For professor or students, this would be a most excellent work, for its style is a simple statement of facts, with conclusions that impress themselves. Even much of the details bearing on the site of centers controlling motion or sensation is introduced. So that, in one sentence, we would say that Dr. Starling's *Elements* is a most excellent volume for teacher, pupil, or practitioner.

The Disease of Inebriety from Alcohol, Opium, and Other Narcotic Drugs—Its Etiology, Pathology, Treatment, and Medico-Legal Relations. Arranged and Compiled by the AMERICAN ASSOCIATION FOR THE STUDY AND CURE OF INEBRIETY. New York: E. B. Treat. 1893. Demi. 8vo. Pp. 400. Muslin. \$2.75.

This volume, edited by Dr. T. D. Crothers, of Hartford, Conn., contains the most reliable conclusions of eminent authorities up to date on all phases of the disease of inebriety, whether by alcoholics, opiates, ether, cocaine, chloroform, coffee and tea, etc. It deals with the subject in hand from a scientific standpoint, and shuns all such clap-trap as so often fills papers on temperance, prohibition, etc. It may be that the reader, who is already familiar with the general subject, may not coincide with all the minutiae of detail and deductions; but he will be compelled to recognize that there is about as little "special pleading" in the book, outside of legitimate deduction, as can be found in any special work. Many facts are given which are both new and instructive to the professional student of the subject, and the fact is well established that inebriety is *a disease*, and as such it must be dealt with. We wish we could say a word that would induce doctors generally to read this book, for then we would be doing a great service to a large proportion of our generation, who are now turned out on society to spread the disease among the young and susceptible as by a contagion.

The Texas Doctor and the Arab Monkey; or, Palestine and Egypt as Viewed by Modern Eyes. By J. M. FORT, M. D., Paris, Texas. Chicago: Donohue & Henneberry, Publishers. 1893. 12mo. Pp. 700. Cloth. \$2.50.

This is not a medical work, but being a book of travels, with a physician of wide experience as its author, it has a good deal of medicine in it. It is made up mostly of systematically arranged notes of travel through the Holy Land—stating things seen and actually heard from the natives. Its style is somewhat of the “off-hand” form of composition describing routes, places, people, customs and characteristics so graphically that the reader does not have to stretch his imagination to give shape or color to the picture. The doctor’s party travelled with a kodak, and this instrument enabled him to bring home accurate pictures of things seen and described. In a word, from beginning to end, the reader will find himself interested, instructed, and profited.

Editorial.

College of Physicians and Surgeons, Richmond, Va.

This is the title of a new *medical university* being organized in this city under a liberal charter granted by court during the past month. The capital stock is not less than \$20,000 nor more than \$300,000. The corporators are many of the best known of business and professional men of Richmond and vicinity. Among them we notice the names of such men as Maj. Lewis Ginter, James B. Pace, P. H. Mayo, Chas. Watkins, E. D. Taylor, T. C. Williams, Col. C. O’B. Cowardin, Rev. Dr. Moses D. Hoge, Dr. Hunter McGuire, Dr. Joseph A. White, Col. A. S. Buford, Prof. Edmund Harrison, Dr. Wm. W. Smith (of Randolph-Macon College), Judge Geo. L. Christian, Hon. J. Ran. Tucker, Col. B. B. Munford, Stephen Putney, Joseph Bryan, E. A. Saunders, Jr., Joseph Cullingworth, D. O. Davis, John Pope, R. L. Brown, F. S. Myers, Thos. Atkinson, Thomas Potts, etc. Such names look as if real push and business were behind the move, especially when we learn that the Board of Corporators has already held several largely attended and enthusiastic meetings, and has at work excellent committees to report to a full meeting within a few days. Dr. Hunter McGuire is President, Dr. Joseph A. White is Sec-

retary, and the Virginia Fidelity and Safe Deposit Co. will serve as the Treasurer of the Board. The College will be a three term institution, chiefly on the graded plan as recommended by the Association of American Medical Colleges, and will in every way strive to take first rank among the prominent colleges of the country. Its university feature consists in the fact that, under well chosen professors, there will be a thorough School of Dentistry and a School of Pharmacy, as well as the School of Medicine.

For the *School of Medicine*, the professors thus far chosen to compose the faculty are Drs. Hunter McGuire, *Chairman*; Joseph A. White, *Secretary, etc.*; Hugh M. Taylor, Stuart McGuire, Landon B. Edwards, Thomas J. Moore, Edward McGuire, Lewis Wheat, Isaiah H. White, George Ross, Paulus A. Irving, Jacob Michaux, M. D. Hoge, Jr., Wm. S. Gordon, W. T. Oppenhimer, John Dunn, Chas. H. Chalkley.

Among the Demonstrators, Assistants, Lecturers, etc., selected are Drs. J. F. Winn, J. N. Ellis, Virginius W. Harrison, Charles V. Carrington, J. P. Roy, — Jones, etc.

The *School of Dentistry* will be thoroughly organized and conducted under the direction of Drs. Lewis M. Cowardin and Charles L. Steel.

The *School of Pharmacy* will be organized, equipped and conducted by Messrs. T. Ashby Miller and Andrew T. Snellings, each a Graduate of Pharmacy.

An important feature of the College of Physicians and Surgeons, Richmond, Va., will be the establishment of Hospitals and Dispensaries, and the utilization of suitable material for clinical purposes. Indeed, it is proposed, as far as practicable, to illustrate the lectures by cases in point, laboratory experiments and demonstrations, etc.

That the success of the College of Physicians and Surgeons, Richmond, Va., is assured is indicated by the large number of students who have already expressed their purpose to attend the first session, which will probably be opened October 3d, 1893. It is probable that a formal announcement will be issued in the advertising pages of this journal for July.

The Medical Society of the State of West Virginia

Will hold its Twenty-Sixth Annual Meeting in Parkersburg, June 7th, 8th, and 9th. The date is unfortunate, for it exactly conflicts with that of the American Medical Association in Milwaukee. But notwithstanding this, under the zeal and push of the officers, we may well expect a most

excellent session. Dr. D. P. Morgan, of Clarksburg, is President; Dr. D. Mayer, of Charleston, is Secretary; Dr. H. B. Stout, of Parkersburg, is Chairman of the Committee of Arrangements; Dr. J. A. Campbell, of Wheeling, is Treasurer—a most important officer. The Vice-Presidents are Drs. Thomas M. Hood, of Weston, R. B. L. Trippett, of Kingwood, and C. O. Henry, of Shinnston. Among authors of papers or reports we find the names of Drs. L. D. Wilson, of Wheeling, L. S. Brock, of Morganton, B. F. Irons, of Pickaway, A. R. Barbee, of Point Pleasant, R. S. Henry, of Charleston, C. B. Blubaugh, of Parkersburg, A. S. Maddox, of Petroleum, G. A. Aschman, of Wheeling, etc. It is sincerely to be hoped that the lethargy which has too long rested upon the good profession of West Virginia will this year be shaken off, and that, imbibing the spirit of the profession of other States, they will join their State Society, and go actively to work to establish it in the front rank of the State Medical Societies of the country.

Professorships in Medical College of Virginia.

The Board of Visitors of this institution, during its session in this city early in May, elected Dr. Geo. Ben. Johnston, of Richmond, Va., Professor of Surgery, to fill the vacancy occasioned by the death of Dr. J. S. D. Cullen. The selection was a most excellent one from the list of available men of worth that was presented. Dr. Johnston has grown rapidly in the favor of his many friends, and has performed some bold operations with a skill that has rightly given him high rank among the able surgeons of Virginia. In addition, he possesses many elements of popularity which will be brought to bear in the interests of the College. He has just cause to feel complimented by his practically unanimous election, and those who had the selection in charge are to be congratulated.

During the same session of the Board of Visitors, two new Chairs were created—one of Ophthalmology, Otology and Laryngology, and the other of Histology, Pathology, etc. Professors to fill these chairs will be elected early in June.

As will be noticed from the advertisement on the card board facing page 35, Dr. Christopher Tompkins has been elected Dean of the Faculty.

Several Book Notices, Analyses, Editorials, etc., have been crowded out of the June number by the amount of original contributions, etc., in it.

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Original Communications.

ART. I.—The Management of Retroflexio Uteri *

By J. R. BUIST, M. D., of Nashville, Tenn.

If we accept "displacements" as the generic term in common use for abnormal uterine deviations, and prolapsus, procidentia, anteversions and retroflexions as sub-divisions, we shall find, according to all observers, that the retroflexions compose the largest group.

In my own experience, I have found this backward deviation—that is, where the organ is bent on itself, the anterior face of the body looking backward to the sacrum, and the fundus lodged in Douglas' cul-de-sac—an exceedingly common state of affairs in women applying for treatment, even more common than the standard authors lead us to believe. Sanger, of Leipsig, states that in 700 cases of pelvic trouble, he found 108 of retro-deviations. Winckel's statistics give a ratio of 19 per cent., and Lohlein's of about 18.

It seems to us, when we consider the position and attachments of the womb in the human female, a matter of no great surprise that displacements of the organ occur with

* Read before the Tennessee State Medical Society, April, 1893.

such frequency. In order to perform the offices that nature has assigned the uterus, and to occasion the least embarrassment to neighboring organs, it is provided with very free motility. Supported below by the structures that make up the pelvic floor, including the normally occluded state of the vagina; lightly stayed by the round and broad ligaments, it floats, as it were, between the tissues of the pelvis and the superimposed abdominal viscera. The uterus has in reality only one tolerably firm and resisting attachment, namely, between the middle of its posterior surface and the sacrum, the utero-sacral ligaments, constituting the lateral folds of Douglas' pouch. This has been aptly named by Schultze the suspensory ligament of the uterus. When this attachment is normal, the vertical mobility of the organ is limited, while the fundus may be moved from side to side and backward and forward with very slight resistance, thus permitting the bladder to fill without embarrassment. The os and vaginal cervix also move freely in the direction opposite to the fundus, and readily yield to a distended rectum, so that the suspensory ligament serves as a pivotal point of motion for the whole organ. The comfortable, normal equipoise of the uterus depends upon the integrity of so many different anatomical structures; the organ itself is the subject of so great and oft recurring physiological fluctuations in weight, size, and texture, and the supports and appendages so liable to disease, inflammation, and traumatism, that the wonder should be that displacements do not occur with even greater frequency than we find them in clinical experience.

The history of gynæcological progress is marked by the most divergent and opposing opinions as to the real pathological import of retroflexions. Observers of equal opportunities for experience and investigation have written on both sides of the question. At one period, when a backward displacement was found, it was assumed to be the cause of both local and general symptoms, and, if these were not present, it was believed they would not be long in developing. It was the fashion to regard this as the essential

pathological factor in the case, and a correction was as much demanded as in a dislocated shoulder. Pessaries of all forms were invented, and we all believed a new era had dawned upon womankind.

Following this epoch, came the new views on pelvic inflammations, practically initiated by the researches of Grupil and Burmutz, and which finally led to the differentiation of the varied affections of the pelvic organs, and to what we are always so proud to claim as modern gynæcology. With the general acceptance of these teachings, the rôle assigned retroflexions was altered, and pessaries were relegated to antiquated practitioners. By many these displacements were regarded as of no pathological significance, not in itself producing any local inconveniences or remote reflex troubles.

A noted German anatomist went so far as to maintain that the retro position of the womb was normal, having been led to this belief by finding so many examples in the cadaver. In very recent years there has been some reaction from the extreme views of ten years ago. Displacements and the means of correction have been much more written on in the past four or five years, and through the influence of the German school in our day, and especially by the able teachings of such men as Küstner, Schultze and Fritsh, we are again in danger of having the pessary rage in vogue. These two extreme views on the pathological bearing of retroflexions do not coincide with my own experience, nor are they in conformity with the teachings of the best gynæcologists of the present day.

Apropos of the value sometimes attached to backward deviations of the uterus in producing symptoms, we recently read in the *American Journal of the Medical Sciences* a report and discussion before the December, 1892, meeting of the London Obstetrical Society of 407 cases of this displacement, in which the author found that chronic pain of some kind was present in nine-tenths. The frequent seat of pain is the back—generally the sacral region. Next most often came sensations of descent and unilateral pains, mostly in

the ovarian region, cases of left-sided pain outnumbering those of right-sided in the proportion of three to one. In a small proportion lower abdominal pain is the chief complaint, and in a very small minority trouble in the locomotion is the prominent symptom. Pain in defecation is present in less than half the cases, due either to constipation or diseased rectum. Irritable bladder is complained of in one case in five, but painful micturition is not a symptom of this deviation. Leucorrhœa is not common.

While statistics of this sort may be of some value, yet on account of the almost constant association of other pelvic disorders with retroflexions, and because the report does not give any of the concomitant lesions that must have existed in many of these cases, the value of the record is comparatively small.

That there are instances of this form of displacement where neither antecedent nor attending morbid conditions are found, where no harm seemingly comes from the mal-position, is doubtless true; nor are such cases always in those of deficient development, the infantile uterus, nor in those of senile atrophy, we will admit; yet they are rare, exceptional cases. On the other hand, we do find a small class of cases where the retroflexion itself is certainly the prime cause of the symptoms complained of. There is no endometritis or parametritic disease, and nothing whereby we can account for the local and general disturbance except this mal-position; we will have nervousness, headaches depression of spirits, along with dragging sensations in the pelvis, especially in walking, uncomfortable micturition and constipation, etc., etc.

Hildebrandt and Schultze have noted that retroflexions interfere with the descent of the urine along the ureters; while the latter author remarks that "catarrhal affections of the upper part of the urinary canals, and even nephritic attacks, occur far too often in women with retroflexion of the uterus for us to think their association with the displacement accidental." The same author states the case clearly as regards many cases, but not applicable to all,

when he says, "The complications are most commonly the immediate causes of the symptoms, but the complications are the consequences of the retroflexion." Nothing, too, is more convincing of the truth of the above statement, and affords a proof of the evil effects of retroflexions *per se*, than the results that are sometimes seen to follow the reposition of the organ and its support by a pessary. Such immediate relief clearly shows "that the pressure of the retroflected corpus uteri was the cause of the painful and paretic symptoms."

Such cases, I think, every experienced gynæcologist will admit are not common, but exceptional, especially since uterine pathology has been better understood.

The large proportion of retroflexions are certainly complicated with one or several morbid conditions of the uterus and its appendages. As Dr. Pozzi, the author of the greatest work on female diseases yet published, expresses it, these backward deviations of the uterus are nearly always factors, co-efficients in a complex group of pathological changes in the pelvic organs, neither to be ignored nor to be clinically considered alone and separately. We may as well expect to cure a case of appendicitis by merely evacuating the perityphlitic abscess without removing the appendix as to speak of curing a retroflected corpus uteri by merely replacing and retaining it by mechanical means.

Again, it is often impossible to say exactly which of the morbid conditions were antecedent—which cotemporaneous and which consecutive. For instance, a continued state of retroflexion will develop a congested and diseased endometrium—will displace the ovaries and embarrass the whole pelvic circulation—while one of the most obvious evils that backward displacements cause is the bad drainage of the uterine cavity, leading on to excessive menstruation. Thus the displacement becomes the cause of the complications.

We do not propose in this paper any extended discussion of the etiology of retroflexions; but in order to appreciate intelligently what we will have to say on the management of this condition, we must review the most important mor-

bid states that lead on to such displacements. In life, the healthy uterus possesses a certain firmness and tonicity of texture by which it is enabled to maintain its natural antverted position in opposition to many natural forces. After labor or abortion, the retrograde metamorphosis, by which the organ should be restored *ad integrum*, is sometimes delayed or arrested, and the womb remains heavy, large, soft, and flaccid—in a condition favorable to a bending on its own axis. This condition of subinvolution is often found co-existing with laceration of os and cervix, a condition, I am inclined to think, actively producing subinvolution; for I have observed how quickly the fundus of the organ becomes smaller and firmer after the restoration of the cervix. Possibly the relation of the fundal fibres to the sphincteric are such that the former lose their power when the latter are divided.

The younger Martin, of Berlin, considers partial subinvolution a very important factor in backward deviations. His position is, that often when the placental site has been on the anterior wall, this remains thicker and longer than the posterior wall, with the result of a retroflexion in time—an effect similar to that caused by the presence of a small fibroid in the anterior wall.

Clinical experience has led me to the conclusion that those women who are kept long in bed after parturition, are prone subsequently to suffer uterine retroflexions. This has been observed by Schultze, of Jena, who attributes it to prolonged dorso-decubitus while the womb is heavy and large. My own explanation has been that the long confinement to bed induces a relaxation and want of tonicity in the whole muscular system, together with the defective drainage of the uterine cavity. My practice of late years has been to have my patients, who have gone through a normal, uncomplicated parturition, out of bed on the ninth day. In this way better drainage of the cavity is insured, and intra-abdominal pressure utilized to keep the organ in its natural antverted state.

Another pathological condition which is common, either

antecedent or concomitant with this form of flexion, is a vascular, congested, thickened and hypertrophied state of the lining membrane—endometritis. In America we usually employ this term to describe the affection. Many French authors prefer, and I think rightly, the term metritis, for the reason that the condition, as we meet it clinically, is never confined to the endometrium absolutely; but as there is no well defined line between the mucous and the muscular layer, so the congestion and inflammation extend beyond the lymphoid tissue to a varied degree and extent. Schultze does not seem to recognize this diseased endometrium as any important factor in the displacement. I cannot, however, regard it otherwise than as a direct predisposing cause, and indirectly a very serious factor in accomplishing retro-displacements by leading to salpingitis and ovaritis, with their attendant peritonitis. In fact, if modern researches into pelvic pathology have settled one thing more than another, it is that most of the affections which the gynæcologist is called to treat arise from extension of diseased processes from the vagina through the uterine cavity to the tubes. It is through this channel that microbic invasion occurs. In this way the os uteri is a true “infection-atrium,” always open to admit pathological germs.

In my view of this subject, these abnormal states of the *uterus itself* are the most important causative elements in occasioning the retroflexions—essential elements. According, however, to the teachings of Dr. Schultze, of Germany, the greatest living authority on uterine displacements, the relaxation of the uterine ligaments, especially utero-sacral attachments of the organ, is by all odds the most pronounced factor leading to displacements. This relaxation of the retractores uteri is, according to him, the first defect—the initial lesion. The cervix, therefore, being allowed to fall away from its position near the sacrum, assumes one nearer the bladder, and any active agent easily effects retroversion, which soon becomes flexion. According to this author, the weakened and relaxed state of the ligaments may be occasioned by

general systematic debility, by traumatism of labors, sub-involution of the uterus, as well as parametritic inflammations. Although admitting this sequence of lesions, he lays so much stress upon the condition of the uterine ligaments, and believes so enthusiastically in the cure of displacement by mechanical supports, that he does, to our minds, ignore the true pathology, and upon this erects a false therapeusis. With him ligamentous insufficiency is the puissant etiological factor, and the pessary the means of cure. Schultze himself well describes the effect upon the posterior attachments, caused by pressure of the fundus uteri in Douglas' cul-de-sac. Thus we see that retroflexion itself causes stretching and lengthening of the folds and ligaments; and therefore when we find a well defined displacement backward, how are we to know whether it be the cause or sequence?

We do not wish to imply that the impairment of the uterine ligamentous supports does not enter as an element in the causation of retroflexions, but simply that such a condition is most often secondary to other and more important lesions.

An acute attack of salpingitis and pelvic peritonitis will sometimes produce retroflexion. I have watched this process in at least two cases; in both a most violent inflammatory process was going on, and from day to day I could detect the gradual change in the position of the uterus. There were in these cases no cervical lacerations, no sub-involution, and no relaxation of the ligaments. The endometritis had extended to the tubes, ovaries, and pelvic peritoneum. I expected in these cases to have a permanent condition of retroflexion, but to my surprise, under the usual plan of treatment, the fundus resumed its anterior position. The cases were so severe that for two weeks or more the propriety of abdominal section was seriously considered; yet in one, at the end of ten months, pregnancy took place, and in the other only five months elapsed.

I am not, therefore, fully in accord with the views chiefly supported by German gynæcologists, believing that such

men as Fritsh, Landowsky, and Schultze attach too much prominence to ligamentous insufficiency in uterine retroflexions and give more credit to mechanical means of cure than they deserve. My experience with pessaries has been very disappointing. When a reposition of the fundus uteri has been effected by the proper means, and a suitable pessary adjusted, immediate comfort is given; the patient and physician are highly pleased; but after months and years elapse, and the womb will not stay antverted without support, and no progress made to cure, but rather the reverse, hope vanishes, disappointment follows, and we conclude that in the majority of cases the pessary is a snare and a delusion.

In entering upon the discussion of "The Management of Retroflexio Uteri," we must, first of all, discriminate two classes of cases clinically quite distinct—those in which reposition is possible by the ordinary manipulation, and those where the fundus is bound to its false location by adhesions—the reducible and non-reducible.

Taking first the *reducible class*, we recognize a group composing quite a minority, where the displacement is unattended by either local or general symptoms, purely an anatomical deviation, such as the undeveloped infantile and the atrophic senile uteri, as well as an occasional case among those of normal activity. It goes without saying that such cases are not to be interfered with; they need no treatment.

In that large class where attendant pelvic disease and present complications are found—where, for instance, subinvolution, endometritis, and mild degrees of salpingitis and ovaritis, with recurrent peritonitis, exist—our treatment consists in thorough curettement, under antiseptic irrigation, and then packing the cavity with iodoform gauze. After thirty-six hours, remove the first packing and replace the gauze. This should be repeated a number of times at longer intervals. Along with this treatment, or preceding it, the application of cotton tampon soaked in boro-glyceride must be regularly carried out with abundant

antiseptic douches. It is a question whether the curettage of the cavity should be attempted while the evidence of parametritic inflammation is present. Formerly it was strongly advised not even to put a sound into the uterus if any tubal inflammation was suspected. Since, however, the successful practice of Drs. Polk and Pryor, of New York city, has been published, I believe we can with impunity treat the cavity, if it is done in a thorough manner, with great benefit to the tubal and ovarian complications. This will appear explicable if we remember that the diseased endometrium bears a causal relation to the parametritis, and that by rendering the uterine cavity thoroughly aseptic, we cut off the source of diseased germs and therefore stop destructive inflammation.

If fissures and lacerations of the os and cervix exist, it is of the last importance that these be restored along with the above treatment. A patient of mine, the subject of retroflexions for six or eight years, during which time she had had four children, illustrates the value of this point. The organ was freely movable; there never had been any parametric complication; she had a large and flabby uterus, with a large vaginal portion and a moderate laceration on each side. Whenever the uterus was allowed to become retroflected, headaches were sure to supervene, with back-ache and a sensation of weight and dragging in the pelvis, together with constipation and hæmorrhoids. Many modes of treatment and every form of pessaries had been employed, but the latter never had the least tendency to cure. Finally, a year ago, I operated on the cervix, removing a large V-shaped plug from each side and suturing the edges. The result has been most satisfactory; the organ does not lay in an extreme anteverted position, but has never yet fallen back.

What I desire to emphasize is that, in this class of cases we are now referring to, the proper treatment of retroversion is to restore the womb itself to a healthy condition, and at the same time relieve all outside inflammation, trusting in this way that the relaxed and elongated ligaments will

regain their normal tone. It is, of course, a necessary part of the treatment to keep the patient a long time at rest in bed, and at the end of the treatment a suitable pessary may be worn by way of precaution.

In cases where the subinvolution is partial—that is, according to Martin, of Berlin, where the placental was the anterior wall, and, in consequence, this part has remained thicker and larger than the posterior, pushing the fundus over and backward—the proper treatment here again would be a complete curetting of the endometrium on this surface, supplementing with gauze packing.

In such cases as those cited above, when acute attack of salpingitis has occurred, if the malposition continued after the acute attack had passed off, we must resort to massage, to reposition by bimanual efforts, and the introduction of a pessary, provided there has been no serious prolapse of the tubes or ovaries. I think there is more hope of effecting a cure in such cases by wearing a pessary a few months than in any other class.

I think it is pretty well accepted now that two important adjuvants in the management of this form of deviation are massage of the uterus and its adjacent structures, and the employment of electricity locally, both by the constant and faradic current. I cannot go further into the use of these means than to mention them.

If, after all these means have been put into requisition, and a pessary has been worn by way of precaution for a time, the retroflexion relapses, what is to be done? Some, who believe that the displacement *per se* will do no harm, will advise the case to be left alone. Those who realize that in the majority of cases a return of the fundus to Douglas' cul-de-sac means, in a few years at farthest, a relapse of all painful symptoms and a return of the patient to invalidism, will prefer that a pessary be constantly and permanently worn. Sometimes pregnancy or the climacteric supervenes, to the great relief of the gynæcologist. When this does not happen, the alternative, in our opinion, must be looked

for in one of the modern plans of fixation by surgical procedure.

It is hardly necessary to say, to so well informed a body as this, that a pessary is never used to adjust a retroflected uteri, only to maintain it in its normal position after reposition has been effected. Nor need I say that a pessary can only be worn with comfort when no parametritic tenderness exists, and no displacement of the annexes, to allow painful pressure from the instrument.

Most all of the pessaries designed for retroflexions, provided they are of the proper size and shape, will keep the organ in normal anteverted equipoise, if no special cause operates to throw the fundus back. When this occurs, either the instrument is forced to and out of the introitus, or considerable discomfort is felt.

The principle upon which they are all intended to accomplish the end is the same, viz: that the cervix uteri be kept far back in the pelvis, while by mechanical laws the fundus falls in the opposite direction, and the intra-abdominal pressure becomes properly utilized. They differ, however, in the point selected to be acted on, and in the extent of injury they produce in the long run.

The Hodges', with Thomas', and their modifications, as well as Cutter's, all act by pressure upon the vaginal wall close to its insertion into the posterior cervix in the posterior vaginal vault; while Schultze and Landowsky and some others apply the pressure to the front of the vaginal portion. With the first, much of the pressure is exerted upon the utero-sacral ligaments, especially if the upper end of the pessary has a sharp curve. A recent writer has suggested that it is this irritation of these ligaments that causes a chronic inflammation in them, which results in their shortening and consequent radical cure of retroflexion. I cannot accept either the premises or conclusion as a matter of fact. My experience is that most of the pessaries relax and elongate the suspensory ligaments, and therefore do harm.

The figure 8, the sledge-shaped, Landowsky's, and that class where the force is applied in front, are designed on a

correct theoretical idea; but I think in practice they will often fail—at least it has so happened in my hands, because the cervix cannot be kept in the ring or ovale, because either the cervix is too short, or from some other condition the os and cervix slip away from the grasp of the instrument.

But while I will not assert that we can discard mechanical appliances *in toto* in the management of uterine dislocations, or that many cases do not pass years in comparative comfort with a well fitting pessary; and while I am even willing to admit that a few cases are cured by the use of this instrument, I still contend that generally they do harm, and that after being worn several years, the tendency to retroflexion is as pronounced as it was at the beginning. They have the disadvantages almost inherent in them of overstretching the utero-sacral attachments, of bruising the exposed cervix and producing hypertrophy, and of relaxing and dilating the vaginal canal and keeping up leucorrhœa. In our judgment, a gynæcologist, properly skilled in his profession, should consider in any given case all the morbid conditions complicating the displacement, and relieve each by appropriate treatment, and then, as a last resort, bring in the aid of a pessary, if nothing better can be found.

In reference to how we should manage cases where the fundus is united to adjacent parts by inflammatory adhesions, I would, in the first place, remind the practitioner that he must examine the degree, intensity and strength of the adhesions, as these vary greatly in different cases.

In that class of cases where the uterus is pretty firmly attached posteriorly, and no urgent general symptoms appear, and local pain is slight, and perhaps an excessive menstrual flow is the only inconvenience—in such cases the proper plan, I conceive, is to restore the endometrium to a healthy state and leave the displacement and adhesions undisturbed.

Very often the adhesions are weak, and the imprisoned uterus may be freed by bimanual massage, packing the vagina with sterilized gauze or cotton, and occasional efforts at reposition with the finger. After this liberation has been

effected, the course of treatment above indicated can be employed.

Schultze, of Jena, recommends that when firm adhesions prevent reposition, a good plan is to dilate the cervical canal fully, introduce the finger of one hand into the cavity and, with the other hand over the hypergastrium, force the organ into anteversion. This, of course, should be done while the patient is under an anæsthetic.

In those very bad cases, where not only the uterus is displaced, but tubes and ovaries are prolapsed and the whole matted together by exudates, the only chance is in a cœliotomy, in which event it will generally be found that the ovaries and tubes are so diseased that they cannot longer be expected to functionate, and their extirpation becomes justifiable. In this event, some of the surgical procedures for fixation will be in order.

The present age, which has witnessed so many remarkable advances in surgical gynæcology, is by no means lacking in procedures for the radical cure of retro-displacements by fixation in one way or another.

The first among these attempts, in point of time, is that generally known as Alexander's operation. It consists in opening the external inguinal ring, drawing down the round ligaments, and, as soon as they are taught, to secure the distal ends outside and to the ring. This operation of shortening, of course, is only to be done upon a uterus in the anteverted or normal position, and therefore only cases that are reducible can so be dealt with. The only difficulty connected with the technique is that of finding the fibres of the ligament spread out and lost in the surrounding structures. The idea was originally conceived by Alquié some fifty years ago, a surgeon of Montpellier, France, for prolapsus uteri, and only put into practical execution by two Englishmen in 1881-'82, without the knowledge of each other, and hence is sometimes called the Alexander-Adams operation of shortening the round ligament.

For some years after its introduction it was not favorably received, but later it has become a well recognized operation.

The dangers of the operation are not considered serious. Harrington, of Boston, collated about 140 cases, done by fifteen different operators, with only three deaths, and this series was among the earlier cases; my impression is that those of later date would show a far less mortality.

The scope and indications of this means of fixation has not been fully agreed upon by surgical gynæcologists. Some, like Dr. Mundé, believing it suitable in strictly uncomplicated cases, where the pelvic structures maintain their normal resistance, and the vagina is normally occluded. Others, like Trélat, of Paris, advocate it in most cases irrespective of complications. All operators, I think, are in accord in reference to the importance of previously treating the endometrium by curettage and drainage. Some insist on wearing a vaginal pessary for several months after the operation.

As to the remote results of this procedure, it cannot be said that the reports are entirely confirmatory; of course, many cases are not followed up for any lengthened period, and their histories are of negative value. A good number of relapses have been observed, owing to the stretching and elongation of the ligaments. The same end has been attained by Gill-Wiley, Polk, and others in New York by shortening the round ligaments through abdominal section—the plan of the first being to reduplicate the ligament so as to shorten it sufficiently and suture the folds together. Such a procedure is perhaps only admissible when coeliotomy is performed for some other purpose. Altogether, at the present day, this mode of treating retroflexions is fully endorsed by the best men in the speciality of gynæcology. The next most approved plan of treating these backward displacements by surgical intervention is the fixation of the fundus uteri to the anterior abdominal wall, or hysterorraphy—gastro-hysteropery of the French.

As Pozzi has suggested, in an extensive historical review of this procedure in his incomparable work on gynæcology, the present operation of suturing the fundus uteri to the abdominal wall above the symphysis originated in the plan

that was sometimes resorted to by the older ovariologists of stitching the stump of the pedicle to the abdominal wound, and finding that retroflexions and prolapsus were radically cured without any ulterior inconvenience. The first to do the operation for retroflexion and with success was Koeberle, in 1869; but in this case, as in all the earlier operations, it was the stump after ovariectomy that was sutured to the abdominal incision. Lawson Tait, 1880, after removal of the appendages, replaced the retroflected fundus and sutured it to the abdominal wall, passing the stitches through the substance of the uterus. To Olshauser, however, is given the credit of properly systematizing the procedure, both for prolapsus and retro-displacements.

Leopold, Czerny, Howard, Kelly, and Pozzi have done much to improve the technique and popularize the operation. The mode of procedure, therefore, at the present day is that of direct immediate fixation of the fundus, with or without ablation of the appendages.

The peritoneal investment of that portion of the fundus that is to be in apposition to the wall is first gently abraded, and three sutures are passed transversely from one side of the abdominal incision through the substance of uterus and out into the opposite lip. Some operators use sterilized catgut for sutures, passing them within the margins of the incisions, and when tied become buried sutures. Others use silk worm gut and pass and tie them as the other retaining deep stitches are tied. The last are allowed to remain ten or twelve days and are withdrawn. There does not appear to be any bar to a rapid and close union, and a few weeks in bed, and the support of a vaginal pessary for a couple of months after, where the pelvic supports are of doubtful strength, is sufficient to insure lasting union.

The prognosis of this operation, gastro-hysteropexy, as to any immediate results are not grave—not more so than an uncomplicated cœliotomy. Sometimes hæmorrhage from the needle punctures has occurred, but the cause of most danger is to be feared on the side of severing the adhesions, especially those uniting the fundus to the rectum. A few

deaths only have been reported. The ultimate prognosis in reference to the persistence of the fixation is also good; a few cases, however, with a tendency to relapse in both prolapsus and retroflexions, have been recorded by Olshauser and Säger. As to the influence of this mode of fixation upon consecutive pregnancy, experience has not fully established its gravity. Some cases have gone to full term without any interruption. A few have been recorded where abortions occurred from the third to the sixth month. Whether the gynæcologist is justified in opening the peritoneum solely for replacing the retroflected organ and stitching to the abdominal wall, is a question still *sub judice*. If the abdominal section is to be made in the interest of other complications, I think the indications are positive that this mode of fixation should be resorted to. It would seem that Alexander's operation is the more simple and less dangerous, but in irreducible cases it is not practicable.

Certainly if the displacement is giving serious annoyance and rendering the patient an invalid, and all the milder means of relief have been employed, it becomes the duty of the surgeon to propose the operation of hysterorrhaphy, and with the consent of the patient to execute it under complete antiseptic precautions. The suturing of the uterus to the abdominal wall without section and opening the cavity is certainly too hazardous a procedure to be sanctioned. Some surgeons have made a compromise by first incising the abdominal wall as far as the peritoneum, then to pass the sutures from side to side through the uterine tissue, keeping the fundus well anteverted by the sound in the cavity. At the present day it is evident that abdominal fixation is growing in favor.

Another class of operative measures for the radical cure of retro-deviations are such as are done through the vagina—vaginal hysteropexy. Numerous attempts since 1850 have been made to fix the infra-vaginal portion of the cervix to the posterior wall of the vagina after reposition of the corpus uteri to its normal position, but no established and accepted operation has been put forth.

The plan proposed by Schücking of bringing about a forced ante flexion, and maintaining this position by a suture passed up into the dilated uterine cavity, through the anterior uterine wall and downwards between this and the bladder, although very favorably reported on by the author, has never been received by surgeons outside of Germany with favor. The method has several inherent disadvantages, and the remote results have not yet been proved to be successful.

The method of Dührssen, more recent and essentially differing in technique, has the same end in view, namely, forced ante flexion. In a recently published report of 130 operations done by his method, he gives more than 89 per cent. of permanent cures. Many of his cases were complicated, yet no deaths are reported. The procedure devised by Dührssen is to make an incision into the anterior fornix of the vagina parallel with the long axis of the uterus, separate the cellular tissue between the bladder and corpus uteri up to the attachment of the peritoneum. A temporary transverse ligature is inserted as high on the uterus as possible, which serves to draw down and flex the fundus. Then three longitudinal sutures are passed from the cervix up through the anterior wall of the uterus; when these are tied a short flexion is secured. These sutures are buried, being catgut, and the incision closed. Those who are interested in this operation will find an account of it in the March number, 1893, of the *American Journal of Medical Sciences*, page 344.

The last surgical attempt at the radical cure of retro flexion which we shall allude to is that executed by the noted German gynæcologist, Freund—pelvic-colpo-hysteropexy. He opens the posterior fornix into Douglas' cul-de-sac by a free incision; attaches with catgut suture the posterior supra-vaginal portion of the organ to the serous covering of the posterior pelvic wall just below the promontory. In other words, a shortening of the retractores uteri or suspensory ligament is designed, packs the opening with iodoform gauze, and leaves it to granulate. Some modification of

this idea has been practiced by others. What permanent success this procedure gives I am not in a position to say, but, if a safe and feasible operation could be done in this way, it is evidently the most promising method theoretically that has been proposed. There is no question that, if the cervix could be kept far back towards the sacrum, no retroflexion would be possible.

This paper has extended so far that we can only add a few conclusions.

1st. We believe that in the large majority of cases the predominant morbid state allowing of retroflexion is to be found in the uterus itself; a diseased state of this organ is the *primum mobile* of the trouble.

2d. Next, an extension of the metritic disease to the tubes, ovaries, and peritoneum is the most usual sequence of changes, and the relaxation of ligamentous supports the last.

3d. The skilled gynæcologist will treat the complications first, resort to pessaries last, and when opportunity offers, or the symptoms severe enough, select some one of the surgical methods of fixation.

151 *N. Spruce St.*

ART. II.—Purulent Puerperal Peritonitis.*

By VIRGINIUS W. HARRISON, M. A., M. D., of Richmond, Va.

This subject may be divided into first, local; and second, general purulent puerperal peritonitis.

The causes of local peritonitis of this class may be due to either the extension of the infection from the uterus, or from a pre-existing collection of pus, which is ruptured at or soon after labor.

General purulent puerperal peritonitis may be caused by the extension of the local and infecting the whole system, or by lymphatic absorption, which is indicated by constitu-

* Read before Richmond Academy of Medicine and Surgery, April 25th, 1893.

tional symptoms, preceding the local, or possibly, in a few instances, through the veins.

It is very important that we should have a clear conception of the difference between a purulent peritonitis, which is at first local and then becomes general, and one in which the general system is first infected; for this latter is a much more serious trouble, and much less amenable to treatment, and by far less favorable in its prognosis.

In speaking of causes, we read after men who are in a position to speak with authority, that those who keep themselves and their patients clean, their instruments and all other things used in the accouchement aseptic, have no cases of fever to treat. Yet there are cases reported by those who we believe are cautious in this respect. However, it is a little peculiar to notice in medical literature on this subject, the attending physician will commence the history of his case by saying a midwife delivered the child, and he was called in afterwards, as if this statement will be sufficient not to attach any blame to him for the infection.

Not wishing to be different from the rest who have recorded cases, I will report one. Dr. Hugh M. Taylor referred to this case several meetings ago.

On December 30th, 1892, I was called to see Mrs. J., white, age 21, and a well-formed woman, who had been in labor for twenty-four hours, attended by a negro midwife. Being alarmed at the length of time she was taking, her husband sent for me. When I reached the house, I found the baby had been born about five minutes, and the midwife pulling on the cord, saying the "after-birth" had grown to the patient. I advised her to let it alone, and in twenty minutes the placenta came away naturally; but immediately thereafter had quite a severe hæmorrhage, which was luckily soon controlled.

I remained about an hour, and left her doing well under the circumstances. Her husband told me he would let me know if he needed my services further.

On January 1st, being sent for, I found Mrs. J. suffering from nausea, and had vomited a great deal of bile. Temperature 102° F. I ordered a powder of calomel and soda. The next morning I found her much better; temperature normal, and feeling like having something to eat. That

evening I was summoned to see her. She told me she had a pain in her left groin, and felt like something had broken loose; the pain did not appear to be very severe, and was relieved by hot turpentine stupes. Temperature was 100° F., pulse 90. Quinine was ordered, and whiskey with milk. There was no collapse, or any indication of a hæmorrhage.

January 3rd, 11 A. M. General appearance much better, as far as her feelings could tell. Temperature 101°, pulse 100; belly tympanitic, but not so tender to touch as the night before. Ordered vaginal injections, continued quinine with nourishment. 5 P. M., temperature 100°, belly more tympanitic, and much more pain, and all the symptoms of peritonitis.

January 4th, Dr. Taylor saw the case with me; but in the meantime, the woman had become rapidly worse, and in almost a dying condition. We tried to stimulate enough to perform laparotomy, but she died in a very few hours.

In thinking over this case, I think if I had operated the night before, instead of waiting for more conveniences, she might have had a chance for recovery. Being poor people, and not having the necessary articles to insure cleanliness, I decided to wait until the next morning.

The prognosis of the two varieties of peritonitis is very different. In general purulent peritonitis, after the system has become fully infected, before the local symptoms are manifest, the case is desperate, and likely to terminate fatally; but where the local symptoms are the first to occur, though the pain and distress are more severe, surgery lends a helping hand, and finds the only chance for a successful issue. The performance of laparotomy, or cœliotomy, as it is often called, is demanded before the general system becomes infected.

This leads to the treatment, which is divided into preventive and curative.

Preventive.—There is no doubt in the minds of most men that these cases occur most frequently in the hands of the inexperienced and the uncleanly. Hence its so frequent occurrence in the practice of midwives, who act as accoucheurs, as well as nurses. This was well exemplified by the remarks of a gentleman upon this floor a few evenings ago,

in speaking of the large number of cases that occurred in the practice of two midwives in this city, who have recently finished their earthly mission, with financial benefit, at least, to the physicians.

So cleanliness of hands, instruments, patient, and everything connected with the lying-in room, is the alphabet, so to speak, of preventive treatment. Then be sure you have left no particles of placenta, membranes, nor blood-clots.

Whatever damage that may have been done the parturient tract, repair at once, if possible, without necessitating further discomfort and danger to the patient.

Sometimes, however, we will meet with septic peritonitis, as well as septic infection. And how we shall treat this dreaded disease is a question we often find hard to determine, as we find such varied advice, one directly opposed, in some instances, to another. Septic infection requires to be treated according to the severity of the attack. A mild case, treated by saline purgatives, to make the bowels carry off the infecting matter, will often be all that is required. Then we will meet more severe cases, in which, in addition to this, washing out the uterus with antiseptic or aseptic douches will be needed. And again, we will have cases which require curettement of the uterus, and packing with iodoform or other antiseptic gauze. But we may do each and all of these, and yet the case goes on to septic peritonitis.

In simple septic peritonitis, hot applications in the form of poultices and turpentine stupes, will often bring about a cure, if its source has been removed, and the patient supported by concentrated nourishment and stimulants. When septic peritonitis becomes purulent, then we must look to surgery for help. As soon as we are certain we have pus in the belly, we must perform laparotomy for its removal.

In general purulent peritonitis, when the system is profoundly infected before the peritonitis occurs, the inflammation of the peritoneum rarely goes on to suppuration, for the reason that the patient will succumb ere the pus is formed; hence, an operation could do very little for the

unfortunate patient, even though it was resorted to at the very onset of the peritonitis.

In conclusion, I advise those who go to extremes in the support of their respective views as to treatment, to adopt a middle-ground for usual cases, and treat *each individual case* according to the symptoms of *that* case.

ART. III.—Treatment of Sterility.

By W. R. PRYOR, M. D., of New York, N. Y.

Lesions of the ovaries and tubes sufficiently destructive to prevent the formation and transfer of an ovum to the uterus, are productive of symptoms of such grave import that the possibility of conception does not enter into our consideration of the case.

Sterility existing as the chief feature in a case, and being the condition for which we are consulted, is invariably of uterine origin. It may be defined as the inability to conceive by a woman whose menstrual function is apparently normal, or nearly so. Certain conditions are essential, that conception may occur and the growth of the fœtus continue normally. Not only must an ovum be fructified, a thing which may occur in any part of the genital tract, and under the wide range of conditions incident to gross structural changes in the uterus and adnexa, but just as necessary are the retention and growth of the ovum so vitalized. And it is the conditions which enter into these two factors which chiefly interest us. In order that a proper nidus for such growth may be furnished, certain changes must take place in the endometrium. Therefore, the whole responsibility, after the ovum is fructified, falls upon that membrane. The endometrium must discard its epithelial lining; it must become engorged with blood, and its retiform tissue must become filled with lymphoid cells. The endometrium is the placenta-forming organ, and the decidua cells arise from the lymphoid elements.*

*The cause of, and minute changes occurring during, menstruation in women, and the correlated function in animals, may not here be discussed without making this article of such scope as to preclude its being a magazine paper.

Any changes in the endometrium and uterus which will prevent the occurrence of the phenomena mentioned will prevent conception. And inasmuch as these phenomena occur chiefly at the menstrual epoch, it is then that conception takes place, and it is then that occur whatever symptoms accompany the disturbing changes. Every essential to conception may be present, but yet the ovum be not retained; it is washed away in a too vigorous discharge of blood.

Clinically, these cases of sterility are presented to us generally as cases of ante flexion in women who have never conceived, or as acquired in women who have had, perhaps, but one child. The essential causes of the sterility are identically the same in both cases. Those who first treated of this condition to any extent, as the late Drs. Sims and Simpson, saw the true cause of the condition in the gross changes in the uterine canal. They attributed it to the flexure of the cervix and the stenosis, and their treatment was directed to attempts to correct such distortions.

All of this arose from a wrong conception of the menstrual function and ignorance of the changes which occur during the menstrual act and early pregnancy. We now know that the one central point in the whole process of procreation is the formation of the placenta, to which all the other phenomena and changes in the uterus are merely contributory and secondary. Sims and Simpson directed their energies to enlarging and straightening the cervical canal, being governed by the idea that spermatozoa cannot enter the uterus where the canal is flexed or stenotic. Their position was entirely illogical; but even to day, though having before them all the recent work of anatomists and physiologists, there are those who still teach the old ideas and still practice the old treatment. Normally, spermatozoa penetrate the minute uterine ends of the Fallopian tubes; is any cervical canal, even in the most aggravated case, so small? Is it rational to say that such a canal which will admit a Simpson's sound will deny entrance to a spermatozoon? Furthermore, we find sterility in women who have

had one child, and where the cervix is often badly lacerated and gaping. Surely here there is no stenosis. In these cases another school of gynæcologists attempt to relieve the sterility by sewing up the cervix, and usually the same men adopt both practices. We have, then, those who see the cause of sterility in a stenosis, and those who attribute it to a laceration. But, as I said, the same mind generally entertains both ideas. The truth is, that the changes are practically the same in both classes of cases, and there is the absence in both of the phenomena essential to conception.

Marked *atrophy* of the endometrium causes sterility by creating a paucity of lymphoid elements, and by a diminished blood supply. We find this condition generally associated with infantile uterus, with simple antelexion, and in those who have been subjected to the application of powerful caustics, as nitric acid, carbolic acid, and zinc chloride. Clinically, such cases have dysmenorrhœa of severity, characterized by a scanty clotted flow and followed by a watery leucorrhœa. The epithelium does not melt off gradually as it should, but comes away in shreds, and even as a whole cast. The blood clots because of the sparseness of lymphoid cells, and the pain is produced partly by the uterine contraction to expel the clot, but chiefly by the disturbed innervation and arterial tension.

When the membrane is in a state of exaggerated *hypertrophy*, there are present the necessary conditions of exfoliation of epithelium and multiplication of lymphoid cells, but the menstrual discharge is so profuse and of such sudden onset, that the ovum is either washed away by it or caught in a large clot. There is dysmenorrhœa here due to the same causes as where the membrane is atrophied; but the blood clots, not because of lack of lymphoid cells, but because it is far in excess of such cells. Normally, the menstrual blood does not clot, and the menstrual flow is not excessive and sudden, but comes on gradually. Days before the blood appears, exfoliation of the epithelium has taken place, and the lymphoid cells have sufficiently multiplied. The bloody discharge is produced by the rupture of

the dilated and redundant capillaries, whose contents cannot, in woman, be otherwise removed, owing to the dense character of her submucosa and muscularis.

This form of sterility we find associated with ante flexion, with retroversion, with marked cervical hypertrophy, and, in fact, with those conditions which produce increased size and blood supply in the uterus.

Sterility, such as we find in parous women, may be due to either atrophic or hypertrophic changes in the endometrium. But usually it is caused by much more serious changes. These women generally have a purulent discharge from the uterus, and are therefore infected. The endometrium is usually hypertrophic, but is, at the same time, septic.

Staphylococci or gonococci cover the surface of the membrane, causing exfoliation of the epithelium and the extrusion and death of leucocytes. These women have septic endometritis. The sterility is due to the inability of the ovum to find a surface denuded of epithelium and with underlying lymphoid cells. It finds surfaces without epithelium, but they are covered by pus cells. These cases of sterility in those who have borne children, may present the changes of simple endometritis, but the inability to conceive is most often due to a septic infection of a chronic character. I have too often dealt with this subject to here repeat what I have formerly written, and which is easily accessible to every one.*

The changes in the endometrium noted in women who have never conceived, may possibly have been gradually brought on by the altered shape and position of the uterus. But as such distortion is congenital, it is reasonable to assume that the endometrium very early begins to assume a pathological state. Certain it is that those women begin their menstrual life with endometria far from normal. But so long as these have not become altered in essential characteristics, they may conceive, even though a flexion or ste-

**Trans. N. Y. Obstet. Soc.*, 1893; *Amer. Jour. Obstet.*, Vol. XXV; *Trans. N. Y. Academy of Medicine*, 1892.

nosis be most marked. Girls with markedly flexed uteri, who marry early in life, before their endometria have become markedly changed, conceive readily.

Acquired sterility in parous women is commonly found associated with subinvolution, with retro-positions occasionally, but nearly always as the remains of a low form of septic infection.

The objective point in our treatment is the endometrium, and we strive to restore to that organ the functions which are essential to conception. Undoubtedly, we may accomplish this occasionally by repeated dilation; more often by the methods of Sims and Simpson, and almost invariably by my method. We cannot tell whether conception does not occur because the endometrium does not cast off its epithelium, because there are not produced sufficient lymphoid cells, or because the sanguinolent discharge is produced in such a way as to destroy or wash away the ovum. We may, to be sure, infer in which way the result is produced. Dilatation is not advised, and for many reasons. In the first place, it occupies a position midway between operation and treatment, with none of the cleanliness and consequent safety and benefits of the former, and all the accidents incident to the other. If the gynæcic surgeon will keep constantly before him the fact that but a fractional inch of tissue lies between the endometrium and peritoneum, a tissue rich in connecting vessels and lymph streams; if he will view all diseases of the uterus from the peritoneal rather than the vaginal aspect, his treatment will be a safe one, and made in the light of possible complications. Furthermore, the results of simple dilatation are not permanent, and the procedure must be repeated. It must be considered of temporary benefit.

The methods of Sims and Simpson are largely followed in America. Their operations are based upon the supposition that a stenotic or flexed canal is to blame for the sterility. Although the anatomy and physiology of the endometrium is now perfectly understood, there are still those in America who teach and practice the use of stem

pessaries. Inasmuch as the author for years was so placed that daily he could observe the results of their use, he feels qualified to speak on the subject. Those who use them consider the cervical stenosis as the objective point. Having done the incisions here described, the uterus is not washed out, and is not curetted, but dilatation is done. The pessary is then introduced and retained in place by cotton. It is removed in three days, and an application of iodine or carbolic acid made to the endometrium, and the stem again put back. If the uterus be simply anteflexed, the stem will stay in without support; but if the cervix looks out in the axis of the vagina, the stem must be retained in place. These stems are straight, and forced into place in the flexed canal. They act according to their advocates, by straightening the canal and establishing drainage. They keep these incised and dilated canals open without doubt; and as they are left in during the menses, connection, douching, etc., the discharges are very profuse—more profuse, in fact, than before they were used. Under their use and the applications, fair success is obtained after six months' treatment.

Now, if the sterility and dysmenorrhœa were due, as maintained by nearly all stem pessary men, to the stenosis, they should be at once cured by the operation. But these gentlemen treat the endometrium for a long time to "get the secretions healthy"—they considering that spermatozoa will not live in purulent secretions, when the emissions of every gleet man are filled with them in an active state. They do not know that the fault lies with the structurally changed endometrium. Their applications do some good, but it is tardy, and comes when the patient is about worn out with treatment. I cannot estimate accurately, but I have known so many inflamed tubes come from this treatment, that together with a very common attendant upon their use—broad ligament lymphangitis—they do nearly as much harm as good. If used in a case of simple endometritis, it speedily becomes purulent. Not a drop of pus is produced by the method here to be advocated.

The stem pessary requires months to accomplish a result. It produces pus, it frequently causes inflammation in the

tubes and peritoneum, it does not drain, and it does not cure endometritis. It is on the face of it an absurdity to say a cavity may be drained by plugging it up. The sole beneficial feature in this method lies in the applications of iodine and carbolic acid.

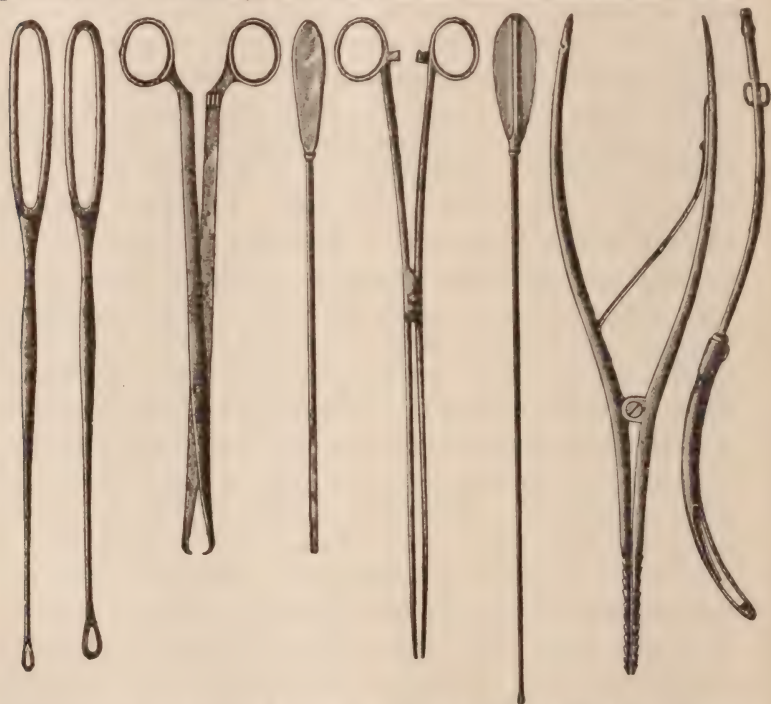
It but remains for me to say that the treatment of ante-flexion and sterility by the stem pessary is not based upon accurate ideas of the pathology of the disease, and the function of the endometrium.

My method is based solely upon what I believe to be the true function of the endometrium. If sterility exists because of faulty action on the part of the endometrium, I seek to remove every particle of that structure down to the muscularis, and give the woman a new cytogenic membrane, formed under advantageous circumstances.

Preparation of the Vagina for Operation.—Admitting that in most cases there are pathogenic germs in the vaginal and cervical canal, the right does not lie with the surgeon to suppose any case exempt. Therefore, a method must be adopted, and a technique in operating employed, which supposes existence of such germs in all cases. Before every vaginal or uterine operation, the vulva should be shaved. Both vulva and vagina should be scrubbed with a sterilized silver brush and laundry soap, preferably though with creoline ten per cent. in mollin ninety per cent. This cleansing is done by introducing the brush and scraping the vagina, not only by a backward and forward motion, but also by rotating the brush. When it is thought that all the mucus and germs have been rubbed off the membrane, the field of operation is irrigated thoroughly with either a one and one-half per cent. solution of lysol, or with a saturated solution of boracic acid. The vagina being cleansed in this way, and the speculum introduced, the cervical canal should be sterilized by swabbing with a five per cent. solution of carbolic acid. All instruments that are to be used should be boiled in a three per cent. solution of washing soda for one-half an hour—care to be taken to open all forceps and other toothed instruments before putting them in the solution.

The operator and assistants prepare themselves for operation in any one of the many ways known and employed, to produce absolute cleanliness. During the operation, the instruments are kept in a boiled salt solution seven-tenths per cent. in simple cases; and in septic cases in carbolic acid, five per cent. For irrigating purposes, I use only boiled saturated solution of boracic acid crystals as being the safest and least irritating antiseptic.

Curetage.—This is the operation which I invariably perform for the radical cure of dysmenorrhœa of uterine origin and of sterility. The instruments necessary to properly perform a curetting, are shown in the illustration. One



instrument is omitted, namely:—the long handled, blunt pointed bistoury, for I seldom curette and forcibly dilate for sterility without making 'incision in the cervix. The ordinary fountain syringe which has been carefully cleansed is used as an irrigator. The operation is best done on the

back, the patient in the lithotomy position, and the solutions caught by Kelly's pad; the patient being retained in the lithotomy position by Ott's or Aspell's crutch. This position is preferable to Sims's; for with it irrigation is easier, and at any stage of the operation a proper examination may be made.

The field of operation being properly cleansed, and the other preparations prescribed having been made, the operation is begun. It should never be done without an anæsthetic; for proper work without such, is utterly impossible. The perineum is depressed by either Sims', Simon's or some improvised speculum; the cervix is exposed, and the exterior lip seized with a pair of blunt forceps; the uterus is then drawn down unless fixed, and the forceps given in charge of the assistant who stands at the patient's right. This assistant depresses the perineum with the speculum in his right hand and his left hand resting immovably on the pubes, holds the cervix in one position throughout the whole operation. With the sound the direction of the uterine canal is now determined. The bistoury is then introduced, and the proper incisions are made. The dilator is next employed in the following way; it is introduced with the curve upwards and moderate dilatation made. Its blades are now allowed to close, the dilator turned a little, the dilatation made in its new position. Alternately turning and dilating in this way, it is very easy, without exercising undue force in any one direction, to dilate even an infantile cervix to one-half an inch or more, and without danger. The incision is merely for the purpose of enabling rupture of the mucous membrane and the subjacent connected tissue to take place in the proper direction. Dilators, having screws in the handles, should be used without such attachments, for in case dilatation is carried too far, the residual spring in the blades may suffice to cause rupture of the uterus, and the screw prevents the operator releasing the strain, even though he feels the tissue tearing. The uterus is now washed out with the double catheter pictured above. With a Sims sharp curette, the entire endometrium

is then removed. The instrument must be introduced gently, holding it as one would a pen, and whatever force is employed, must be used in the withdrawal of the instrument. Employed in this way, curettage is perfectly safe, and serious damage cannot be done, as one may demonstrate by firmly grasping with his hand the blade of the instrument and pulling it out with his other hand. It is very easy to curette the posterior and anterior surfaces of the uterus. But a small size of instrument must be used to remove the membrane from the lateral angles and fundus. Blunt curettes are not thorough enough. If a man must use such because of the supposed danger attaching to the sharper instrument, it is questionable whether he should do the operation at all. Following the curette, the uterus is again to be thoroughly irrigated. No application is made, and no injection of iodine, iron or other astringent employed. The field of work is again covered by clean, sterilized towels, the operator's hands washed, and the uterus is packed with iodoform gauze. If the cervix has been well dilated, the gauze may be gotten in with the packing forceps; but if the cervix be rather small, the strip of gauze may be laid over the end of the applicator, which has previously been bent to the direction of the canal and introduced in this way. I employ forcible dilatation with incision, to the exclusion of all other methods, especially that by graduated sounds, because I wish to obtain a permanent, new calibre to the cervical canal, and because I wish to obtain an immediate destruction of function of the cervical nerves, upon which depends that contraction of the uterus with pain and expulsion of the dressing, which is observed and described by those who use the graduated sounds. Furthermore, dilatation by sounds is done by using force against the grasp of the double tenaculum; and either the dilatation is imperfectly done, or else the tenaculum is torn through the cervical tissue, lacerating it.

The uterus is tightly packed, as tightly as possible, with the gauze which has been cut in one long narrow strip, and the end of the gauze is left projecting from the cervical

canal. The double hooked forceps are now loosed, the vagina wiped dry, and the vagina loosely filled with iodoform gauze. Supporting the vaginal dressing with the forceps, the speculum is now withdrawn. The vaginal dressing should be so applied as not to project from the vulva, thus enabling the patient to empty the bladder without the use of the catheter, and without soiling the dressing. A loose, light dressing of iodoform gauze and borated cotton is applied over the vulva and retained in place by a T-ban-dage. The operation produces no pain, and morphine is unnecessary in the after-treatment. The patient is given to eat almost any light thing, bowels properly attended to, and she is allowed out of bed on the fourth day. The first dressing is made on the eighth to the twelfth day, when we remove all the vaginal gauze, and that in the uterus.

In the nulliparous, I merely introduce at this first dressing, a small filament of gauze, and very lightly pack the vagina with the same. This second dressing remains in five days longer, and is then removed. In women who have had children, and in whom the uterus is much enlarged, the drain of gauze must be employed up to the next period, removing it and renewing it about once in five days; and after the period has ceased, twice a week tampons of ichthyol, ten per cent. in glycerine must be introduced behind the uterus, for the purpose of causing a decrease in the organ's size. In the nulliparous, no treatment is given the patient after the second dressing, unless it be necessary to attend to some coincident operation which has been performed, such as amputation of the cervix. The tampon treatment of the parous women is continued just so long as the organ is enlarged. The elective time in both classes of women for the operation, is about a week after the cessation of a period. It must not be forgotten that infection is easier in a uterus deprived of its membrane by this operation than in one not so treated; and all management and treatment of these cases must be undertaken in the light of this fact. For at least six weeks after the operation, these

patients should live *absque marito*. As I have said, it is exceedingly rare for me to perform this operation without doing at the same time, incision. In cases of simple ante-flexion, where the axis of the cervix occupies to that of the vagina the proper angle, and where there is not much cervical hypertrophy, I simple precede the forcible dilatation by Simpson's operation of bilateral incision. But I cut through the tissues of the internal os to a depth not greater than one-eighth inch on each side. Where there is much cervical hypertrophy, to the extent of exceeding two inches, I precede curettage by Hegar's operation of amputation of the cervix. In lesser degrees of cervical hypertrophy, it suffices to posteriorly incise the cervix from the os externum to near the vaginal junction, and, at the same time, to anteriorly incise the internal os. This procedure is very similar to the operation of the late Dr. Sims, but is less extensive, in that I do not cut through all the tissues of the posterior lip of the cervix from internal os to the vaginal junction, as he did; and I do not produce that amount of bleeding which followed his operation, and which was one of the reasons why he used in these cases a stem pessary.

This operation induces a very rapid involution of the cervix. I cannot explain how this takes place, but in a few months a cervix of two inches will shrink to half its former length.

All three of these operations upon the cervix are for two purposes: to facilitate the curettage, and to so alter the nerve and blood supply of the uterus as to enable a new membrane to form under auspicious circumstances. The main point in the operation, around which centers every other procedure in it, is the curettage; and this fact must not be lost sight of while performing other operative procedures upon the uterus in these cases of sterility. It is not the position of the organ, it is not its shape, it is not its size, which produces the sterility, but it is the condition of the endometrium. And inasmuch as, in my opinion, the changes in this membrane are partly due to position, size and shape of the muscular uterus, so do I believe that false

positions and distortions must be corrected at the time that we operate for the sterility by curettage, in order, as I said, that the new membrane which we seek to have formed, may do so under propitious circumstances.

If the operation has been properly done, repair of the membrane takes place in the following manner: In the first place, the inside of the uterus is absolutely free from micro-organisms. As a consequence of this, reproduction of tissue takes place in the absence of germs; therefore those cells which bring about this reproduction do not have to exercise their phagocytic property, but devote their attention solely to the production of histological tissue. As a first and immediate result of the curettage, white blood corpuscles leave the vessels, and array themselves against the iodoform gauze, which constitutes the intra-uterine dressing. As Marcel and Delbet have shown, iodoform produces no change in the live body cells; therefore these leucocytes remain living and active. They are followed by plasma cells, which, finding in these healthy living leucocytes their proper pabulum, actively engage in the process of spinning the fibrillar tissue of the new membrane. Lymphoid cells in great numbers extrude upon the surface, and upon these is thrown the chief stress of reproducing the new membrane. They arrange themselves in a line of cuboidal cells, which cells rapidly change to glandular, to cylindrical, to ciliated cells. The rapid reproduction and multiplication of this layer, together with multiplication of the lymphoid cells beneath it, and of the fibrillar retiform tissue, causes the superficial layer of cells to be thrown first into waves, the depressions of which become deeper and deeper until, at the end of from six weeks to three months, there is produced a new endometrium, histologically perfect, and similar to that which is found in young women about eighteen, who are normal.

Not only by microscopical sections of uteri, which have previously been curetted, but also in the clinical manifestation of its peculiar function, have we proof of the statements

which I have made regarding the reproduction of the endometrium. The very general theory, that the new membrane is formed from the epithelium which remains in those few glandular crypts which have not been removed, is utterly fallacious. For karyokinesis would have to operate through many months to bring about the proper result, according to that theory. And furthermore, multiplication of epithelial cells can produce epithelial cells only. The new endometrium formed, as I have described, is thus the product of action of the lymphoid cells, and of the plasma cells. Karyokinesis of epithelium is operative in producing new epithelium only.

This treatment of sterility in nulliparous and parous women, I have evolved solely from a consideration of the anatomy and physiology of the endometrium, and a knowledge of those changes which are present in all cases of sterility. I have also kept clearly before me the belief that the uterus is distinctly an embryonic organ, and as such, is largely capable of reproducing any portion of its structure, provided such reproduction may take place under the protection of our new surgery. I never see pus on the dressings I remove after this operation, but I do find it covered and soaked frequently with disintegrated blood corpuscles and lymphoid cells.

The treatment I employ for the relief of these cases is in marked contrast to the methods of Simpson and Sims. In the three years during which I have used it, and in the many cases in which it has been employed, I have yet to see a failure. I will report a few typical cases:

CASE I.—*Anteflexion with Retroversion*.—Irene W., aged 18, married three months, menstruated first at twelve years. Always irregular, coming on every three weeks usually, but occasionally postponed two months. Has been treated for profound anæmia, with no results. Always has a great deal of cramps at menses, with the passage of clots. Periods sometimes last a week, sometimes one day. Occasionally they come on, persist for a day, disappear for several days, and return again. Has frightful occipital headaches during her menses, so as to almost make her hys-

terical. Upon examination, I found anteflexion with retroversion, cervical hypertrophy of two inches, and purulent endometritis.

Jan. 31st. Antero-posterior and bi-lateral incision, dilatation, curettage, irrigation and gauze packing.

Feb. 2d. Changed the vaginal dressings.

Feb. 5th. Removed all dressings, gave a vaginal douche of boracic acid, and subjected her to no more treatment. The patient returned home two weeks after the operation.

June 3d. The patient is one and one-half months pregnant.

CASE II.—*Acquired Sterility*.—A. B., age 25, married four years, one child three years ago.

June, 1891. Trachelorrhaphy by another physician.

July, 1892. I examined her, and found her suffering with hypertrophied or sub-involuted uterus and chronic hypertrophic endometritis. Curettage, etc., as in the other cases.

October, 1892. She is three months pregnant.

CASE III.—*Chronic Salpingitis*.—E. H., aged 24; first miscarriage at the fifth month, one year after marriage; second miscarriage at one month.

July, 1891. After the first miscarriage, she was in bed six weeks, and before the fœtus was expelled, she was in bed thirteen weeks, flooding all the time. The patient menstruates irregularly, painful, normal in quantity; has continuous pain on the right side, and incessant purulent leucorrhœa.

Upon examination, I found retroflexion and retroversion, with enlargement of the uterus. The uterus drawn down to the right side. The case is one of retroflexion with old tubal and right, broad ligament disease.

January, 1892. Cured, etc., and broke up adhesions. February period did not appear, neither did the March or April. I went to the country, and on returning, found her miscarrying, after treatment by another physician. Removed three months fœtus in a state of decomposition.

CASE IV.—*Peritonitic Adhesions—Acute Pelvic Peritonitis*. E. M., age 25, married four months. In March, 1891, she had an acute attack of pelvic peritonitis. In October, she flooded for seven days. In November, the same. December 2d. the same. December 15th and 16th, had another hæmorrhage. January, 1892, she flooded from the 2d to the 10th.

Upon examination, I found the patient had an ante-

flexed uterus, with a firm, broad band of adhesion, extending from the left cornu of the uterus to the descending colon. The utero-sacral ligaments exceedingly tender. There is a mass of lymph in the posterior cul-de-sac. The cervix is hypertrophied for nearly two inches, purulent endometritis. The whole organ is much enlarged, due, I think, to the irritating presence of the adhesions, and to the endometritis.

January 18th, 1892. I did an antero-posterior section, curetted and packed with gauze. She was discharged April 15th, the uterus having been gotten to normal size. Menstruated the 8th of last May. Confined January 31st, 1893.

CASE V.—July 7th, 1891, I operated upon a patient for *acute septic endometritis with acute peritonitis, the result of a neglected abortion*. The after-treatment of this case was long and tedious, for the purpose of reducing the hypertrophy of the uterus. Not only was the endometritis relieved so that she conceived, but she advanced in pregnancy to the fourth month, and miscarried then as a result of a fright produced by a robber.

March, 1892. She was again operated upon before super-vention of sepsis; had one period, conceived, and was confined January 16, 1893.

These cases are reported merely for the purpose of showing the value of the method in various classes, none of which were simple. The great beauty of the treatment is this: In the first place, it is surgical; secondly, it involves no long after-treatment; and thirdly, the results are almost perfect. I have now gotten to look upon the method as so sure of success, that I can almost promise relief, where the woman is not too old. My oldest patient successfully operated upon by this method was 39. I failed in one at 43. In all the rest, no failure took place.

I publish this clinical paper because the treatment of sterility by this method is limited to my own practice and those whom I have taught, and I wish it to become of more general adoption; for I deem it worthy of use, to the exclusion of all other methods. I have never seen fever follow the operation; but, on the contrary, in cases where the symptoms of acute pelvic involvement were present, with

rise in temperature, the latter disappears after the operation. Therefore, I must consider as imperfectly performed, any operation followed by fever.

15 Park Avenue.

ART. IV.—Treatment of Puerperal Convulsions.

By JOHN S. HUGHSON, M. D., of Sumter, S. C.

My attention has been recently attracted to the subject of *the treatment* of puerperal convulsions by a very severe case about two weeks ago, in a primipara, in whom it was necessary, from her condition, to induce premature labor; and on account of total inertia of the uterus, and the impossibility of introducing forceps—the os being insufficiently dilated—to perform craniotomy and remove the child; the result, however, was rapid and complete recovery. And just at this time I read in one of our most widely circulated medical journals, a report of a somewhat similar case read before a prominent “Association of Obstetricians and Gynecologists;” but, notwithstanding hypodermic injections of *one-quarter* of a grain of morphia, pilocarpine, phlebotomy, hot-water baths, steam baths, rectal injections, bromides, chloral, etc., the patient died. In the discussion which followed the reading of this paper, I looked in vain to see some remarks upon the treatment of this terrible disease, but further than the recommendation of veratrum viride hypodermically nothing was said to encourage a young physician to look for better prospects, or to know of any improvement as to the treatment so fully and graphically set forth.

It has been my misfortune to have had, in a practice of twenty-five years, many cases of puerperal convulsions; but for the past fourteen years I have in great part lost that fear that I once felt when called to a case of this kind; for during that time, in a large obstetrical practice, and seeing many cases of this terrific malady, I have not

lost a case. I care nothing for the many theories so beautifully put forth by different authors; it is the practical part, the curing of the patient, that mostly interests me.

The better to illustrate *the treatment* adopted in *all* cases of puerperal convulsions, other treatment as may be indicated being incidental, I take from my note-book four cases occurring some years ago at different periods of the puerperal state.

CASE I.—January 14th, 1880, just after dark, I was called five miles from town to a case of labor in a primipara. Arriving at the house, I was greeted with the unpleasant intelligence that the patient had been having convulsions for three hours. As I entered the room, a convulsion came on. I ordered the immediate inhalation of chloroform, and prepared my hypodermic syringe with a half-grain of morphia, which I administered upon the cessation of the convulsion. There was no return. In an hour the child was born, the patient making a good recovery.

CASE II.—On the evening of the 17th November, I was hurriedly summoned to the house of a gentleman, whose wife was said to be very ill. I found the lady with the first pains of labor; she had had a convulsion at 8 o'clock P. M., when I was sent for. This patient was a delicate lady, primipara, eighth month of pregnancy. The day before, she jumped from a buggy, and had been feeling ever since uneasy sensations in the stomach. Os *very slightly* dilated. Gave chloral hydrate and potassium bromide. At 9 o'clock, she had another convulsion; bled her, and she being no longer able to swallow, ordered an enema of chloral hydrate in milk every hour. At 10 o'clock, another convulsion; injected hypodermically one-half grain morphia. This arrested the convulsions until 1 o'clock, when she had another. Used morphia (one-third of a grain) injected under the skin. No more convulsions until 6 o'clock A. M., when she had another; one-half grain morphia injected. At 9 o'clock, I left the patient to attend some urgent calls, and returning in two hours found she had had another convulsion of greater severity; the coma was deepening; bled her again. At 12 o'clock, had one of the severest convulsions I have ever seen. What could I do? I saw death staring my patient in the face; the husband was almost frantic with grief; anxious loved ones watched to see the spark of life glimmer and go out. They looked imploringly to me.

I had bled her twice; I had used chloral and potassium bromide by enema every hour; I had injected morphine hypodermically in one-third and one-half grain doses, and yet death seemed surely grappling with my patient. I injected into her arm *one grain* of sulphate of morphia, and, as if some bright angel had supplanted the grim monster, she lay quiet, her breathing became easy and regular, the os uteri commenced to dilate, and without another convulsion, at 4 o'clock I delivered her. For days she was ill, but with the attention that a physician gives when himself and a whole community are deeply interested in the patient, and with the careful nursing of her loved ones, she made a happy recovery. Had I not used a whole grain of morphine by hypodermic injection, I feel assured that death would have triumphed.

CASE III.—At 9 o'clock A. M., December 3rd, I delivered a lady, multipara, after a natural labor of ten hours duration. She appeared to be doing well until dark that evening, when I was sent for, the messenger saying she was in convulsions. Hurrying to her residence, I immediately injected a half-grain of morphia in her arm. In a few minutes, she had another convulsion. I repeated the injection at once. She was quiet during the night; had no more convulsions, and made a good recovery.

CASE IV.—A few months after this, I was hurriedly summoned one afternoon to see a lady said to be quite ill. Found a physician in attendance, who informed me that she (a multipara) had been confined, natural labor, seven days before; was much*swollen, and the swelling was still too plainly perceptible, but had done well until that morning, when she complained of severe headache, disturbed vision, etc., for which chloral and the bromides were prescribed; in the afternoon convulsions came on, and when I saw her she had had several very severe ones. She had been bled, chloroform administered by inhalation, and other remedies used, but the convulsions continued with unabated severity. I proposed the hypodermic injection of morphine, to which the physician attending consented, and I gave her *three-quarters* of a grain of sulph. morphia hypodermically. Just after this, a convulsion came on, and this was the last; as soon as she came under the influence of the morphine the convulsions ceased, and with proper constitutional treatment the kidneys, skin and bowels eliminated the poison from her system, and she fully recovered.

I could mention many other cases very interesting in

their different phases to the active practitioner, but these will suffice. Here now are *four* typical cases of puerperal convulsions, each one occurring at a different stage of the lying-in state, in which morphia, by hypodermic injection, proved to be an efficient remedy. The nerves were quieted, the brain rested, and the vital forces allowed an opportunity to recruit their strength and exert their powers upon organic life.

From a large experience with both chloral hydrate and potassium bromide, I now discard them entirely from the treatment of puerperal convulsions. There are some few cases in which venesection may be beneficial, but from its frequent failure to cure the disease we cannot depend upon it. Chloroform is an excellent adjunct to the treatment, but possesses no curative powers. Opium internally is often prescribed, but the stomach is seldom in a condition to absorb anything, and how often is it that your patient is beyond the stage of being able to swallow. Now, what will you do? What do you know of puerperal convulsions? It is a perturbed state of the nervous system caused by the condition of pregnancy, by a foreign body being in the uterus, an organ that is more freely sympathized with through the nervous system than any other in the body. Take a case: There is pain in the head, impairment of the senses, especially the sight, as sparks before the eyes, dimness of vision, great irritability, feelings of distress, difficulty of articulation, all of these being referable directly to the nervous system.

Now, what shall we do? To quiet this disturbed condition of the nervous system is evidently the indication. Opium is the remedy; but the patient is writhing in convulsions, she cannot swallow, the breathing is becoming stertorous, the coma is deepening, and life itself seems to be fast ebbing away. And it is just here, in these terrible cases, that the hypodermic injection of morphia in *large* doses shows its power and wonderful efficacy for restoring the nervous system to its normal state, and aiding nature to throw off its burden, and though weak and prostrate, to

recover the strength necessary to carry on the functions of the body. Do not hesitate to administer large doses, and at once, whatever else may be needed, that is an absolute necessity; not less than one-half grain, and in severe cases a whole grain is imperatively demanded, repeating the injection as may be required.

I do not claim any priority or originality in this treatment; my attention was first called to these *large* doses (one grain or more) by an article from the pen of Dr. C. C. P. Clark, of Oswego, N. Y., in the *American Journal of Obstetrics* for July, 1880. He advocated using from one to one-and-a-half grains of morphine at each injection, and there is now in the enjoyment of health many a woman in this broad land who should bless him for his boldness in thus using what was then considered a dangerous dose. Let others try it, and they will surely find abundant satisfaction in the success that will attend this treatment.

In conclusion, allow me to say, for the benefit of our younger brethren, that in cases where I am engaged in the early period of pregnancy, I rarely ever see convulsions, for I watch these cases closely; and should there be swelling of the feet and legs to any extent, I immediately order 30 grains citrate potass., and 20 drops tincture digitalis, to be taken every four to six hours in one-third tumbler of water, and continued until the swelling abates entirely, to be resumed as occasion requires.

ART. V.—Reform Needed as to Medical Expert Testimony.*

By WILLIAM B. ST. JOHN, M. D., of Bristol, Tenn.

Last week I was summoned by the State, as an expert in a criminal case involving the charge of murder. The defendant was a negro woman, and the deceased of the same race. I was to testify as to the course and location of the pistol-ball, and give an opinion as to the cause of death.

* Read before the Tennessee State Medical Society, Nashville, April 14th, 1893.

I had this kind of an experience: My attendance as a witness embraced three days, for which I received pay at the rate of fifty cents per day, making a total of \$1.50.

During the trial, I had an emergency call, and was absent for a short time; my absence was observed, and a fine of two dollars was imposed upon me.

My opinion was of course controverted by the physician called by the defense; my views criticised by the fierce attorney of the defendant, and I was made to suffer in contrast with the learned doctor on the other side, and was charged with being City Physician, and bound to favor the State with my evidence. I lost three dollars and fifty cents actual cash in the transaction, besides the time from my business, and suffered the unfavorable and disagreeable incidents referred to.

On reflection, it seems to me that the criminal often escapes, but the doctor never does. In this capacity, the chances for loss are manifold; the opportunities for gain are *nil*.

It occurs to me, it would be well for the organized profession of the State to renew the agitation in favor of reform, such as shall give protection to its members, and shall secure them a fair compensation for their services. Where the people, called the State, need the services of the physician in order to convict the criminal, they should pay for the service a *quantum meruit*. No class of professional men are required to make such sacrifices as the physician. Their charities to the poor are *every* day. Even the Christian in the business of benevolence often waits till Sunday for action. They obtain credit for good deeds; the doctors may find a balance in their favor, where the books are correctly kept, as they are said to be in the great beyond.

There is no reason why the people as a State should not pay the physician for professional services. He now gets no more than the non-expert, or the most ignorant witness who happens to know a fact material in the case. Your servant stands on the same footing as yourself as to compensation as a witness. There is no more reason for this than

that you should be paid for the time you are actually employed in professional work, the same as your gardener and at the same rate. In cases of the State there is no poverty element involved, and therefore it ought to pay for professional services as does the individual patient. Aside from the mere question of financial benefits, it seems to me that there is an inherent duty in each of us to maintain the dignity and honor of the profession, and by persistence in such a course we will eventually be recognized by law-makers.

Doctors do not appear to be inclined to follow political channels, and are not often seen in legislative halls, "only here and there a traveler." Owing to this, to some extent, has the law-making power failed to do justice to the medical expert as a witness. It would not be well to mix politics with science; the compound might produce heart failure, a complaint that appears to be sufficiently prevalent already; however, it is not prudent in us to ignore the usual and popular methods of government.

Those who deal in politics should be pledged to favorable legislation in the line indicated, and at last it will come. If a party in litigation desires the services of a physician in his suit, he should pay for them precisely as if he called him in case of sickness, and the *law* should require it. If physicians would assert their privileges and refrain from testifying as experts without proper compensation the wrong would soon be righted.

But it may be said that the mandate of the law is not to be disregarded. The weight of authority is that he cannot be compelled to give a professional opinion without compensation. (*Medico-Legal Journal*, Sept., 1883. *Wharton on Evidence*, sec. 378, and numerous cases cited.)

These enlightened opinions of the most eminent jurist should in substance be embodied in our statutory laws. It would be creditable to the intelligence and justice of the State, and is due the profession.

It does not seem to be understood among us that a physician may be regularly employed by a litigant to testify in cases involving medical opinion evidence.—1 *Wharton on*

Evidence, sections 456, 380. His being so employed, would go to his credit as a witness before the jury, but would not affect his competency.

Duties are correlative; and while those who receive the benefits of his professional knowledge and experience should be required to make adequate compensation, he should be required also to render a *quid pro quo*. In other words, his opinion as an expert should be of a nature to show that he has given the matter special study, practice and observation, and that he has particular and special knowledge on the subject beyond the range of ordinary observation and intelligence.

To become an expert, requires a course of previous habit and practice, or of study, so as to be familiar with the subject. To be known as a doctor is one thing, and to be skilled as an expert on medical subjects is another. The one requires nothing; the other the highest degree of knowledge on the particular subject as the result of study and experience. A doctor is not necessarily an expert on medical subjects involved in litigation. He should be required to have that quality and degree of knowledge on the particular matter to enable him to speak with intelligence and certainty for the safe guidance of the court or jury who has the question in hand. If he is not thus, he is not an expert, and should not be allowed on the witness-stand. For such, no pay should be granted. If he has not the requisite knowledge, he is useless. Technical and scientific knowledge must, however, be based on a broad bottom of common sense, or it is valueless, and often hurtful. A crank in medicine is a dangerous eccentric, and to be avoided as you would a wild animal.

It is much to be regretted, that in many celebrated criminal trials, where physicians testified as experts, the profession as a whole did not appear to advantage. They generally disagreed, and caused doubts to appear through which the blackest of crimes escaped punishment. It is to be deplored that the science cannot be made more certain, or that

the medical expert cannot be made more certain of the science.

If I am correctly informed, about twenty physicians swore that Guiteau was insane, and about the same number that he was perfectly sane. In most cases, the criminal escapes through the fog of medical expert testimony. It is singular, in this noted instance the usual avenues of escape provided by it were not availed of. Guiteau was hung in spite of doubt, and in spite of the plain fact that he was insane. He was a moral monster, and his removal was probably necessary for the good of the State and society; but the outrage on science involved in the deed, is the spot that will not out with washing—the ghost that will not be downed.

Another singular feature in that famous trial was the opinion of Dr. Spitka—by far the ablest and most brilliant of all the medical experts—he had no doubt of the wretch's insanity, and gave the opinion that he would die with insane speech on his lips, which was literally fulfilled.

In the Wharton poisoning case, about the only distinction achieved by the physician was by his repartee on the witness-stand. The lawyer declared that doctors' mistakes were buried six feet under ground. He replied that lawyer's mistakes were hung upon a tree.

It is a notorious fact, that in poisoning cases conviction cannot be had on medical expert testimony alone. The experts usually admit the possibility of other causes of death, and similar pathological conditions from other agencies. Consequently doubts arise, and the poisoner, the worst of all criminals, escapes. The difficulty of detection in such cases appears to increase.

In the Buchanan case, now on trial in New York, it is probable that atropine was given to the victim to obliterate the traces of morphine, and thus to destroy the evidence of crime.

The physician is called upon to meet new conditions evolved in the progressive fine art of homicide.

Physicians who are paid for their skill can afford to de-

vote time to the study and investigation of the subjects as to which their opinion is sought. In such cases, it is better for the State, better for the party, and better for the experts. Much discredit has been cast on medical expert testimony, but it is hardly fair to criticise the work of the laborer who is not paid for his services.

ART. VI.—Treatment of Diphtheria.*

By R. A. PATTERSON, M. D., of Aurelian Springs, N. C.

The constant discovery of new remedies and new applications of old ones, and the appalling fatality of some visitations of diphtheria, even in this day of advanced medical knowledge, seem to justify the effort to cast upon it every ray of light possible, even at the risk of much repetition.

If it be claimed that the pathology, diagnosis and etiology of the disease are understood, the great diversity of systems of therapy offered by various advocates show that the best mode of treatment is far from being established; and should this priceless boon ever be granted, it must in turn reflect great additional light on the causes and pathology of diphtheria, and thereby act as a prophylactic.

Striving to reach this most desirable point—viz., the determination of the most successful mode of treating diphtheria—the writer would add another to the list of remedies, or rather a plan of treatment which has proved most efficacious. This being the object of this paper, as little will be said of the history of general characteristics of the disease as seem compatible with the object annunciated.

Diphtheria has been described under various names from a remote period, the names being taken mainly from its visible effects. A fibrous deposit on certain mucous membranes characterizes the disease. The membrane may be merely attached to the mucous surface, or may infiltrate it and the tissue beneath it. Some writers, however, claim

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that this difference is the proper distinction between diphtheritic and croupous deposit. They contend that when the deposit is superficial and does not infiltrate, it is croupous; and when there is infiltration, it is diphtheritic.

The tonsils and neighboring parts are the regions mainly affected in the early stages; and as it is estimated that three-fourths of the fatal cases result from the invasion of the air-passages, it should obviously be the object of the practitioner to arrest it ere it extends further; and experience proves that this arrest can be made if treatment be begun early on the plan to be described. If not arrested, the membrane may spread to the larynx, trachea, bronchi, the nasal cavities, Eustachian tubes, middle ear, the eye involving loss of vision, the lips, or any of the outlets of the body, and during an epidemic may attack an ulcer on any part of the derma. The first distinctive sign, the grayish white patch, may be preceded by slight inflammation. It may become reddish brown, and varies greatly in consistence as to toughness. If the deep tissues are involved, the removal of the membrane frequently discloses ulceration. If not arrested early, the tonsils and adjacent parts become greatly enlarged. In cases of great severity, there may be slough from the mouth and pharynx. The urine is frequently albuminous, the lymphatic glands often enlarge. Microscopists record that the fibrous membrane contains bacteria, micrococci, pus cells, epithelial cells, and red blood corpuscles.

There is difference of opinion as to the pathology of the disease. One view is, that the vegetable germs find lodgment in the throat in the first instance, migrate to other parts of the body, and so the disease becomes general. Another is that it is general from the beginning, and that the local manifestations are secondary. It is generally admitted to be contagious, and also to be produced by neglect of sanitary precautions. The contagion seems to be feeble in some instances, so as to lead to the denial occasionally of its being communicated in that way. Many striking instances, however, of its contagiousness could be cited.

Now, it cannot be denied, that from the pathology and symptoms, the antidote must be distinctly antiseptic and germicidal; also that it must be tonic and alterative. The disease is rapid in its course, and the success of any line of treatment depends on an early application of the remedies, for, as hinted above, if through delay it is allowed to enter the air-passages, the chances of recovery are greatly lessened.

Adopting this view, and adapting this mode of treatment, then, to the phenomenal success attending it, its correctness is verified, and proves it to be founded on scientific principles, and to be devoid of empiricism.

Before detailing the plan of treatment pursued, the outlines of the history of some epidemics which have come under the observation of the writer, extending back through years, will be premised. In the autumn of 1886, an epidemic of diphtheria presented itself in a locality between Weldon and Gaston, in the county of Halifax; whether through contagion or neglect of sanitary precautions did not appear. There were many fatal cases; in at least one instance three died in one family, and the attending physicians pronounced it to be of a most malignant type. The epidemic extended and entered the bounds of the writer's practice. The first case had his most careful attention. The course of treatment was such as had been inculcated by reputable authors. In spite of every device, it marched steadily on to a fatal termination.

Before being called to another case, the plan of treatment to be cited occurred to him, and in twenty cases following, which about terminated the course of the epidemic, there was not another death.

In the years next succeeding, sporadic cases presented themselves from time to time, which yielded, without exception, to the same treatment.

In the autumn of 1892, the writer was called to the case of a girl, aged perhaps 12 years, who had been under the treatment of another practitioner five or six days, and declining steadily, till at the time she was seen by the writer, it is fair to say, she was *in articulo mortis*. She died within

a few hours. This case was followed by three others in the same family, but the early administration of the same remedies was so efficacious that it prevented the necessity of confining any one of them to bed. During the next week, in a family near by, in which there were seven children between the ages of 2 and 18, the disease presented itself. Having been called to its treatment, and the mother being a woman of strong sense and a good nurse, the writer prepared the medicine, and having given the necessary directions, committed the management of the cases to her. She carried them all through safely, and without other medical advice.

A neighboring physician, a member of this Society, witnessing the effects of the treatment, adopted it, and has related remarkable recoveries from its use. He expresses the opinion that it should be universally adopted.

We come now to the indications of its treatment as suggested by its known attributes. It was stated above that germicides, tonics, and alteratives, have yielded the best results. Some years back, in a prize-essay by Dr. E. S. Gaillard, he warmly advocated a combination of muriatic acid, muriated tincture of iron and potassium chlorate, to be taken internally at short intervals. This was a most fortunate conception, for this combination, on the addition of water, sets free much of that efficient and excellent germicide, chlorine, and yields to the system the tonic, iron, so much needed in the asthenic condition of the system appertaining to this affection. It is a remedy highly approved, and will of itself prove curative in many cases, but, as is well known, it in some cases fails.

A combination of *pinus canadensis* and phenic acid applied locally has been much extolled. The *pinus*, as an application to inflamed and ulcerated surfaces, was highly esteemed by the late J. Marion Sims, especially that prepared by Kennedy; and the writer has in various instances verified its claims as alterative and curative in like cases. The addition to it of phenic acid brings another powerful antiseptic to the aid of chlorine, and the septic tendency of

the disease seems at once to yield to the potency of the two.

Now, it occurred to the writer that if this constitutional remedy, as suggested by Gaillard, and the excellent local application of the pinus and phenic acid were used in conjunction, that it would most probably arrest the rapid advance of sepsis if applied early in the attack. The result after long and thorough test, verified his most sanguine hopes, and in these two applications, constitutional and local, we have a specific for diphtheria, if there is such a principle as a specific for any disease. So that while the writer claims no credit as the discoverer of the component parts, he does claim to have first suggested the combination which appears to be the *ne plus ultra* as to the treatment of diphtheria.

The details of the treatment are these: As soon as the patient is seen, do not delay for the action of a cathartic or other medicine, but begin to combat it at once by the administration of two tablespoonfuls every hour for adults and proportionately less for children, according to age, of the following preparation:

R ^y Potassium chlorate	3j
Dilute muriatic acid,	
Muriated tinct. iron.....	āā 3ij
Distilled water.....	3xi—M.

diminished to one or two doses at night, with tonic doses of quinine thrice daily. This compound has an acid taste, but is not much objected to by children. Immediately after its administration, proceed to mop the throat (depressing the tongue) with a mixture of fld. ext. pinus canadensis, 3j, phenic acid, 10 to 15 drops, the mopping to be repeated after each dose of the solution. The mop may be made of a small twig the size of a goose quill, eight inches long, with a little lint bound at the end. We give this instead of a more artistic implement because so easily extemporized. The mopping should be done carefully, so as not to wound the tender membrane. Petroleum applied to the throat externally may be of service.

Under this treatment improvement begins at once. The

fibrous membrane ceases to extend. If it does not disappear at once, it turns black from the application of the red pinus, contracts around the edges and in a few days disappears, and the patient is decidedly convalescent.

Unlike the plan of treatment proposed at your last meeting by Dr. Martindale, of New York, this course does not require an air tight room, so unattainable in very many localities, nor an oil stove quite as much so, but may be applied easily and speedily anywhere.

ART. VII.—A Few Facts in the History of Abdominal Surgery.

By ANNE WALTER, M. D., of Holly Springs, Miss.

In no branch included in the study of medicine has such marked advancement been made in so short a time as in that of abdominal surgery.

When we see the work which is being done daily by men and women in all parts of the civilized world, and more especially in our own country, and compare the methods and mortality of abdominal surgery in its infancy with those of to-day, the mind naturally reverts to the year 1809, when in an unpretentious little home in Green county, near Danville, Kentucky, a bold deed was done, from which, out of a wilderness of suffering and need, a wonderful field of relief has been opened.

The removal of diseased ovaries was first proposed in the sixteenth or seventeenth century, and was under discussion by the profession for about one century before this operation was performed. Many learned men, made courageous by the sight of suffering humanity, favored the opening of the abdomen, but were withheld by the eloquence of their opponents. So men talked of, wrote about, favored, and discouraged the operation, while women suffered and died, until a student, imbued with the enthusiasm of his tutor, decided to break the bonds of conservatism and come to their rescue. Thus Ephraim McDowell, returning to this country after listening to a course of lectures by John Bell,

of London, deserves, according to Schroeder, "the honor of being the first to perform ovariectomy in a methodical manner, . . . although a few cases of accidental ovariectomies were recorded at an earlier date." Dr. McDowell, in the face of the bitterest opposition from the profession in this country, as well as from the citizens, strong in his conviction that this operation could be done, and having in his charge a patient in a dangerous state of health, resolved upon an ovariectomy. The date was set, and, the fame of this operation having gone abroad, the house of the patient was surrounded by a mob eager to take the lynch law into their own hands should the result of this operation be death. Inside the house, in the presence of a few who supported the operator in his daring deed, the operation, which lasted twenty-five minutes, was done without an anæsthetic, and a tumor removed weighing twenty-two and a half pounds. With friends as a guard, he passed out of the house to await in suspense the result of the first ovariectomy, which was soon followed by three equally successful operations of the same description. To Ephraim McDowell a monument has been raised in the hearts of suffering womankind, which time cannot efface nor the will of man destroy. Although an English chair furnished Dr. McDowell with his theories, American ingenuity preceded these foreign ideas by actual operations, thereby crediting our country with the first two operations for ectopic pregnancy, done by Wm. Baynham, of Virginia—one in 1790 and the other in 1799—with successful results.

Since the year 1809, the history of abdominal surgery is marked by innumerable triumphs and failures. The first case recorded was done by Dr. Robert Houston, who was unguided by any principles of surgery. To quote his words:

"I told her that, in order to effectually relieve her, I must lay open a great part of her belly and remove the cause of all that swelling. . . . I laid open about an inch, but, finding nothing issue, I enlarged it two inches, and even then nothing came forth but a little thin, yellow-

ish serum ; so I ventured to lay open two inches more. I was not a little startled, after so large an aperture, to find nothing but a glutinous substance. . . . I took a fine fir splinter, wrapped some loose lint about the end of it, and thrust it into the wound, and by turning and winding it I drew out about two yards of glutinous substance thicker than any jelly. . . . Then I squeezed out all I could and stitched up the wound in three places, almost equidistant. The lower part of the wound was covered in its whole length with a pledget, spread with some home-made balsam ; over that several compresses dipt in warm French brandy, and, because I judged that the parts might have lost their spring by so vast and long a distension, I dipt in the same brandy a large napkin four times folded, and applied this over all the dressing, and a couple of strong towels also I dipt and swathed her around the body."

This operation was performed without an anæsthetic and the patient recovered. The technique was simple, although hardly a simplicity born of science.

Atlee's account of his case of diseased ovaria, complicated with ascites, also shows wonderful courage, as well as strength of conviction that such an operation was justifiable.

Ephraim McDowell was followed in 1822 by Nathan Smith, of our own country ; in 1825 and 1827 by Lizars and Granville, of England and Scotland ; in 1819 by Crysmar, of Germany ; in France, Nélaton first operated in 1862, at which date Koeberle, of Strasburg, also began to operate. In the great city of London, it was not until 1842 that this operation met with success, although it was in this metropolis that the theory had its birth. Up to the year 1871 seven hundred and thirty-nine ovariectomies had been performed, with a mortality exceeding 50 per cent. This operation, in the hands of several of the gynæcologists of to-day, records a mortality of 3 per cent. This wonderful fall has but added an irrefutable claim to the legitimacy of this operation. The firm basis upon which the abdominal surgery of to-day rests is due in a great measure to the pioneers who persevered in the midst of the greatest opposition, and in the face of such a discouraging mortality as would have

led the majority of operators of to-day to throw down the knife; but with these threads spun out over more than half a century, the present gynæcologists have intertwined asepsis, and have woven a success that the fathers of surgery could never have imagined. The strict asepsis and regard for technique of abdominal surgery has radiated to all branches of general surgery, and has proven a refining influence and a guarantee to success in overcoming the arch enemy of surgery—the microbe.

To realize the progress of abdominal surgery, we must glance first at the early operators as they sat their patients bolt upright while they made the incision and removed the tumor, and then to the present day at some of our operators, who have so far reversed the original order of posture as to invert the patient with their *feet* in mid air. In early days, when operators had no “eyes in the ends of their fingers,” some felt compelled to open the abdomen from ensiform to pubes in order to *see what they were doing!* The first operators began treating the pedicle with whipcord ligatures, leaving the ends out of the lower part of the incision; later it was tied and dropped into the abdomen; after this it was fixed into the wound by ligatures and pins; next secured by a clamp outside of the wound; later it was ligatured and cauterized; still later the ecraseur was used; then again ligated and dropped into the abdomen—a return to the original method. Tait was the first to advocate flushing the cavity. The first drainage consisted of a small tent; then came the use of tubes of different varieties. The history of closing the incision is equally varied, as Houston closed one of five inches in length with three sutures; Wells began by using hare-lip pins, avoiding the peritoneum, but found on post-mortem that the peritoneum had retracted, leaving the impress of the pins upon the gut. Next, sutures of silver and iron, then platinum was again brought into use; finally twisted silk, which Wells used for twenty years; silk-worm gut and kangaroo-tail tendon have been adopted almost to the exclusion of other materials by all operators.

There can be no question as to the gravity of this operation. The dangers incident upon it were at one time thought to be insurmountable; but with the use of antiseptic or aseptic precautions, and by the employment of carefully trained nurses, it has become an established procedure, and the dangers have been reduced to a minimum. But, unfortunately, this fact is not sufficiently appreciated to bring all sufferers under its alleviating hand. There still remains a prejudice and a fear which holds many back, and most unfortunately this prejudice is not confined to the laity, but is harbored by members of the medical profession as well. Even in 1844 Atlee expressed his surprise at this prejudice as follows: "How the horror which pervades the ranks of surgery at exposing the cavity of the peritoneum originated is a question almost as difficult to describe as that of the generation of worms in the intestines of animals before birth; and if its decision involved no more important consequences, would be equally uninteresting. But, unfortunately, this dread of attempting to do good for fear that evil may grow out of it, paralyzes the hands of surgeons and satisfies them to sanction inevitable death rather than incur the possible dangers of a timely operation." Then, in speaking of the above mentioned pioneers, he wrote that their success "shed a bright ray of practical knowledge upon this benighted subject, which now beams a beacon of hope toward which the unfortunate subject of diseased ovarium may turn as from the grave, and look with a well-grounded confidence to years of healthy existence, and the full enjoyment of social and domestic happiness." And how much less should this prejudice be now since the present operators have so justly won the confidence of the profession and the public; and the small prejudice of to-day *does* stand out in marked contrast to that with which the pioneers had to contend in offering their elixir to suffering womankind.

One of the greatest objections brought forward by physicians and general surgeons is that of "unsexing woman;" but statistics have shown that this is a theory which inves-

tigation has annulled, excepting so far as child-bearing and the performance of her menstrual function are concerned; and "is there to be no reckoning of pathological unsexing, even though the remains of worthless organs are present, and does removal do more than disease?"

The operation of Cæsarean section is probably the oldest abdominal operation of which we have any historical account; and the first recorded case which gives us a minute description of this operation was done by the sow-gelder of Seigenheusen, who operated on his own wife, with perfect success, in the year 1500. Rousselus, in 1581, endeavored by his publications and discussions to place this operation upon a scientific footing. Godson, of Vienna, tells us the operation was done for one hundred years without a success, and in the Maternité, at Paris, the same record was made; and an equally unsuccessful history is obtained from England even to the nineteenth century. How almost incredible it seems that, with the dismal results obtained by surgeons, there should be several recorded and successful cases where this operation was performed by the patient upon herself, and also cases equally as successful by midwives, to say nothing of the horn rip cases. The Sängers-Cæsarean operation has kept pace with the other operations in the success which has attended the progress of abdominal surgery, and bears a low mortality, as shown by records in Leipzig, Dresden, and Vienna. The Frauenklinik, in Dresden, lost four women out of forty-two.

The operation of puerperal hysterectomy was first done in 1869 by Storer, of Boston, unpremeditated and of necessity, for uncontrollable hæmorrhage following Cæsarean section, with an unsuccessful result. To Porro the honor must be ascribed of having been the first to methodically plan and carry out this operation, which he did successfully in the year 1876. Since that time the Porro-Cæsarean section has been performed about five hundred times. In 1890 there were forty-eight operations and eight deaths, one loss being due to eclampsia, for which the section was made. In 1891 there were also forty-eight operations, but with

seven deaths. The mortality under the Chrobak method has been reduced to four in twenty five.

The operation of hysterectomy for fibroid was first done in 1837 by Granville, who was followed by Heath and Clay, of Manchester, in 1843 and 1849. America can claim the honor of the first successful hysterectomy by Burnham in 1853.

Let us look for a moment at the great need for abdominal surgery, and the immense amount of good resulting therefrom. A moribund woman, presenting every symptom of collapse, with internal hæmorrhage, and giving a history of pregnancy, supports the diagnosis of ruptured sac of ectopic gestation. This indicates the opening of the abdomen and subsequent removal of the clots and ruptured tube, and the flushing of the abdominal cavity, generally resulting in a recovery a few short weeks from the time she lay face to face with death. Next, let us consider a woman well advanced in pregnancy, but whose labor is made impossible by fibroids filling the pelvis, and possibly complicated by rupture of the uterus; yet by the Porro or Cæsarean section, as the case may demand, she and her child have a fair chance for life.

Along the Rhine, we find additional demand for the relief obtained by abdominal surgery in dealing with the fatal disease of osteomalacia affecting the child-bearing woman—the only cure for which is absolute sterility. Last among the abdominal operations, especially for women, both married and unmarried, we must speak of those for the great mass of sufferers from ovarian and tubal troubles, cases of pyo-salpinx with multilocular pus sacs and ovarian cysts and tumors which frequent the clinics and offices, and which bear with them the history of suffering most intense, causing these women, whose last atom of strength has been expended in bearing these tortures, to plead for relief even by abdominal section. Following close upon these classes of pelvic troubles, come cases of hæmato- and hydro-salpinx, which frequently require the same method of cure after all palliative means have failed. The troublesome

little vermiform appendix has its own history of untold suffering and threatened death, and often requires removal.

The herniæ, various forms of intestinal obstruction, such as stricture, volvulus, intussusception, cancerous degeneration of the bowel and intestinal perforations, bear statistics of lives saved which, by the side of the high, inevitable mortality without operation, speak for abdominal surgery in its benefit to mankind in stronger words than can come from mouth or pen.

ART. VII.—Organic Syphilis.*

By HENRY A. ROBBINS, M. D., of Washington, D. C.

CLINICAL PROFESSOR OF DERMATOLOGY AND GENITO-URINARY DISEASES, MEDICAL DEPARTMENT, UNIVERSITY OF GEORGETOWN.

Sir Astley Cooper, in his lecture on Surgery, taught that "some parts of the body are incapable of being acted upon by the venereal poison, such as the brain, the heart, and the abdominal viscera. Indeed," he writes, "this poison does not appear to be capable of exercising its destructive influence on the vital organs, or on those parts most essential to the welfare and continuance of life."

This statement of Sir Astley, who is probably oftener quoted than any surgeon of ancient or modern times, is liable to be productive of infinite harm, for the very opposite of it is now proved to be the truth.

In direct opposition to the views above expressed, are the statements of my old teacher, Dr. Samuel Wilks, of Guy's Hospital, who says "Syphilis in its ultimate form is capable of affecting every organ of the body; the internal may become equally as obnoxious to the effects of the virus as the external. Many obscure and intractable organic disorders are cases of visceral syphilis, and it cannot be too forcibly impressed upon the young practitioner, that syphilis may affect not only the cranium, but the brain within it,

* A lecture delivered at the Central Dispensary and Emergency Hospital of Washington, D. C., on April 12th, 1893.

or the nerves; not only the muscles of the limbs and tongue, but the heart; not only the pharynx, but the œsophagus; not only the larynx, but the trachea, bronchi, and lungs; also the liver, spleen, and other viscera." (*Guy's Hospital Reports*, Vol. IX, 1863.)

Van Swieten taught that "no organ escaped the influence of venereal poison, and recognized it as the cause of gummy tumors, exostoses, deep seated pains, apoplexy, epilepsy, blindness, deafness, paralysis."

Benjamin Bell, however, was the first writer who put forth clinical facts in support of his belief that "venereal disease induces blindness, deafness, amaurosis, phthisis, rheumatism, epilepsy, and mania."

Aitkin says: "A history of syphilis in soldiers is too often the starting point of a fatal disease. The impairment of the health takes its origin from the date of the *infecting* syphilitic sore. Early implication of the lymphatic glands leads to impoverishment of the blood as an immediate result, and then to the degeneration or wasting of tissues, which attends the general cachexia, and which eventually terminates in death, with complicated and varied lesions, especially implicating the internal viscera."

I will first call your attention to syphilitic lesions of the brain. Medical literature is exceedingly rich in material on this subject, and your acquaintance with it may be your starting point to a successful professional career. A correct diagnosis, and your knowledge of the treatment, will make you famous as the direct result of an apparently miraculous cure of a patient who may have baffled the skill of leading physicians.

Bonnet, Ricord, Callier, and Lallemand have described gummatous tumors of the brain. Ricord described them as syphilitic tubercle of the brain.

Virchow described lesions of the great vessels in those who died from syphilis with lesions in the brain.

Dr. Steenberg (physician for the insane at Schleswig) believed that a great proportion of the syphilitic affections of the brain are subsequent to lesions of the arteries; he

also observed syphilitic localizations in the organs of circulation generally.

Dr. Wilks says: "In the cases where cerebral symptoms have long co-existed with syphilis, a quantity of tough, yellow, fibrous tissue united together the surface of the brain with the adjacent membrane, and this again is adherent to the bone. The cortical substance of the brain at the affected spot is often partly destroyed, and the adventitious material occupies its place. The question has still to be solved as to what structure is primarily affected. Many have given the authority of their name to the opinion that the disease commences first in the bone, but simply for the reason that the osseous is that which had so long been recognized as liable to be affected. But since we know now that other structures may be similarly attacked, we are prepared to look for its commencement in other parts, and even in the brain structure itself. The cases which are so frequently met with are those where the deposit involves both sides of the *dura mater*, and includes in it the bone on one side and the brain on the other. The probabilities are in favor of its occurring in the *dura mater* first, as it arises in the periosteum on the exterior of the cranium."

The nervous symptoms are alteration of intelligence, of sensibility, and of motion. These in connection with local lesions, as caries, or necrosis of the facial bones, or of the cranium; or tumors on the external surface of the cranium, such as gummata, periostitis, or exostosis, at once point to cerebral syphilitic lesions, which are sometimes expressed by persistent epilepsy.

According to Zambaro, besides neuralgia, long recognized as one of the results of syphilitic poisoning, chorea appears as being occasionally developed under its influence.

Paralysis is the most frequent result of the syphilitic poison upon the nervous tissues. Jonathan Hutchinson remarks "That so frequently is syphilis a cause of paralysis, that in all cases where it happens without evident cause, and in which syphilitic antecedents are even possible, it is advisable to try the effects of specific treatment. Un-

doubtedly we often by such means get a clue to the real nature of many an obscure affection of the nervous system."

Professor Jakstch says hemiplegia is the most frequent form of syphilitic paralysis, and may appear from five or ten months to eighteen years after the primary lesion, but in most instances from three to ten years, and often very insiduously. These conclusions were derived on an analysis of fifty-two cases—twelve occurred in his own practice. Paralysis of the muscles of the trunk was not made out in a single case.

Enough has been said on syphilis of the brain to lead you to further research, and the time you give the subject will amply repay you. You will have to go over your anatomy, and you will have to look up all mental diseases, which you will find to be interesting, improving, and useful, both to yourselves and your future patients.

Virchow describes syphilitic growths in the substance of the heart, and refers to those recorded by Ricord and Lebert. Ricord, in his Atlas, calls them "syphilitic muscular nodes in the substance of the heart." They were found in the substance of the ventricles, and consisted of firm cheese-like masses. There was a history of chancres and ulcerated tubercles of the skin. Leber reports that gummata were seen at a comparatively early stage of development in his case, and were found in the wall of the right ventricle. There were tubercles of the skin, of the subcutaneous tissue, genital organs, and bones of the skull. In Virchow's case, there were syphilitic gummata in the testicles.

In the Museum of the British Army Medical Department at Netley, there are two preparations which show such gummata in the substance of the heart. "One occurred in the case of a soldier, twenty-four years of age, under treatment for venereal ulcers of nine months' duration, in various parts of the body. He had lost his palate, and eventually sunk from exhaustion, with symptoms of phthisis. Sections of the muscular substance of the heart showed several isolated deposits in its substance and beneath its

serous covering, and isolated portions of the lungs were converted into a substance of the consistence of cheese."

On January 9th of the present year (1893), John S. Britton, M. D., LL.D., F. R. S., of London, read an article on Syphilitic Affections of the Nervous System, before the Medical Society of London. I take the liberty of quoting two of his cases, illustrative of syphilitic arterial disease.

"The first of these was brought before the Pathological Society by Dr. Walter Edmunds on May 3d, 1892. The patient was a man aged thirty-six, who came under Sir Wm. MacConnar's care on account of an aneurism on the right side of the neck, which had been rapidly increasing in size. He had, a few days before admission, been seized with a sudden attack of faintness, and after admission the mere handling of the tumor frequently brought on similar attacks. Owing to this circumstance, the belief that his arteries were extensively diseased (for no trace of pulsation could be felt in any of the arteries of either upper extremity, and there was a loud basic systolic murmur), and to the fact also that the patient was exceedingly ill, it was decided not to attempt any operative procedure. The patient had had well marked syphilis twelve years previously. He died comatose twelve days after admission. The heart was large, and the pericardium adherent by easily broken down adhesions. The valves were healthy. A gumma about two inches in diameter projected from the groove between the right auricular appendage and the pulmonary artery. The whole of the thoracic aorta, including the arch, was enormously thickened, all the coats being involved, but the outer coat much more so than either of the others. In places they were collectively more than eight times as thick as natural. The thickening extended along the innominate and right subclavian, the latter of which would admit of the passage of a bullet probe. The right common carotid was healthy, but the right internal had springing from it near its origin a globular aneurism about two inches and a half in diameter. The left common carotid was diseased, and only admitted a bullet probe; and the left subclavian, about an inch from the aorta, ended in an impervious fibrous cord. The cerebral and abdominal arteries were all healthy, and no other visceral syphilitic lesion was discovered.

"The second case was exhibited before the same Society and on the same evening by Dr. Herbert Hawkins. It was

that of a girl aged eleven, who was admitted into St. Thomas's Hospital suffering, it was supposed, from acute nephritis. After experiencing one or two short attacks of illness, probably due to infarction of the lungs, she was observed on February 7th to have swollen and cold legs, and, a few days after, swelling of the face. She was admitted on the 20th, being at this time extremely ill. She had general dropsy, was passing very little urine, which contained a small quantity of albumen, but no casts, and there was evidence of pulmonary congestion. Subsequently she passed a little blood on one occasion with her urine, which continued to be for a time very scanty, but, during the last four days of her life, it became fairly abundant and ceased to be albuminous; the lower part of her lungs became solid; her pulse of high tension, she presented the Cheyne-Stokes breathing, and died (apparently from uræmic poisoning) on March 22d. At the post mortem examination gross disease was found in nearly all the arteries of the body. The first part of the aorta was studded with grey translucent spots and patches, from the size of a split pea to that of half a crown; and for a length of three inches, immediately above the bifurcation, the thickening was so great that the channel barely admitted a bullet probe. Similar patches were observed in the common carotids and subclavians, in the left internal carotid as it entered the cranial cavity, and in the right internal carotid involving the origin of the middle cerebral. There was similar disease throughout the pulmonary arterial system. The renal arteries towards their entrance into the kidneys were completely obstructed by clots, which were old and white at the periphery, but red and comparatively recent centrally. There was an old infarct in the kidney, but neither organ showed any evidence of nephritis. The liver presented a patch of peritonitic thickening, and was rather large. The spleen was large and firm, and its capsule thick and covered by old adhesions. The lower and back parts of both lungs were consolidated and contained large infarcts. There was hæmorrhage into each lateral lobe of the cerebellum, the clot in each case being the size of a hazel nut."

"There can be no doubt, however, that the lesions in this case were the result of congenital syphilis."

I find in *London Lancet* (Jan. 1st, 1887,) the following:

"*Syphiloma of the Heart*.—At a late meeting of the London Pathological Society, Dr. W. Pasteur showed a specimen

of syphiloma of heart from a woman aged thirty, who was taken to Middlesex Hospital *in articulo mortis*. She was probably a prostitute. None of the ordinary signs of syphilis were visible except in the heart. The liver had a peculiar marbled appearance. There was some recent lymph on the surface of the left ventricle, which was hypertrophied and dilated. Grayish opaque patches of varying size and distribution were seen in the wall of the ventricle and septum. At least one-half of the ventricle was diseased. The right ventricle was less diseased. The patches were ill-defined and translucent at the edges. There were milky looking patches on the endocardium. Microscopical sections showed infiltration of corpuscular growth, which was very vascular at the margin; the nuclei were spirical and distended. In some of the vessels of the heart doubtful evidences of peri-arteritis were to be seen, and possibly also of endocarditis. The liver showed numerous accumulations of small round cells, like that met with in some forms of interstitial hepatitis of congenital syphilis."

Syphilitic lesions in the lungs have been fully described by many authors. The patient may have all the symptoms of tuberculosis, and yet there may be no tubercle existing in the lung. There is great dyspnœa and periosteal tenderness, and the bodily temperature is not generally increased. I will relate the following typical case, who was a patient of Alfred Fournier at Hôpital St. Louis, Paris:

The patient was admitted on March 1st, 1884. He had been wasting for two months, as he said, and lately he had become so easily fatigued that he was unable to work. He was 39 years old. He had only had a cough for a few days, and had not suffered from night-sweats or hæmoptysis. After admission, however, he spat a blood-stained, mucopurulent fluid. At the left apex, there were all the signs of a large and advanced cavity—cavernous breathing, gurgling and cracked pot sound on percussion. Over the right lung, the breathing was somewhat blowing in character, with subcrepitant râles. Fournier diagnosed tuberculosis of both lungs, but most advanced in the left. The left tibia was enlarged and irregular, and on the same were two gummy ulcers. The discovery of these signs led to the administration of iodide of potassium in a daily dose of 60 grains. After two months' treatment, the signs of lung mischief had almost disappeared, and the nodes had considerably dimin-

ished in size. Eleven months later, the patient was again seen. His general health was then excellent, and the chest lesions appeared to be completely cured. The patient, however, had only continued the iodide for a month after his discharge, and ulceration had re-appeared in the left leg.

Attention is directed to the fact that there were no physical chest signs in this case, by which the diagnosis between tubercle and syphilis could be made. It was only by effects of treatment that the true nature of the affection became evident.

Dittrich and Gubler were the first to give an accurate description of syphilitic deposits in the liver. Virchow described peri-hepatic lesions, and simple gummy interstitial hepatitis. The former never occurs alone, but is generally associated with the latter. The hepatic substance atrophied, and the deposit contracting, is eventually absorbed, causing a cicatrix-like mark. The liver lesions are usually among the later symptoms of syphilis, and are well described by Virchow and Wilks.

In former years, I passed several months in walking the wards of Guy's Hospital, and was present daily in the pathological room, which was under the supervision of the late Dr. Moxon, whose sad death occurred a few years ago. Dr. Moxon found syphilis deposits in the spleen, consisting of sulphur yellow nodules, of the size of peas, plentifully scattered, deep seated, and fatty in their centre. Gummata have been found in the pancreas.

Specific Nephritis.—I take the following from the *Annales de Dermatologie et de Syphilographie*, April, 1881 :

“M. Barthélemy at first quotes from the London Clinical Society. At a meeting of this body, held in January, several cases of hereditary syphilis were reported, in which, among other affected organs, the kidneys had been involved, being the seat of parenchymatous nephritis. Referring to such patients, Mr. Hutchinson stated that when death occurred as a consequence of syphilis, the fatal result was directly due to the nephritis. Dr. Coupland was convinced that patients who had been suffering for a long time from syphilis acquired a true predisposition for parenchymatous nephritis, and were liable to death from this condition. As

a result of his personal researches, M. Barthélemy offers the following: Nephritic lesions are among the complications of all the stages of syphilis, even of acquired disease. Such nephritic complications are always grave. Nevertheless, they are sometimes unable, not only when they occur in adults as a result of acquired syphilis, but also in children affected with the hereditary disease. Together with other specific lesions, they have this characteristic in common; their gravity is in proportion to the age of the patient's syphilis, and the period of time which has elapsed before specific treatment was begun. In children affected with hereditary syphilis, specific nephritis should always be taken into consideration, when the patients are subjected to accidents for which nephritis may be held accountable. When a physician meets nephritis in an adult, he would do well to think of the possible specific origin of the renal difficulty, in view of the great number of cases of unsuspected syphilis."

In 1878, Dr. L. P. Yandall, of Louisville, Kentucky, reported (*Maryland Medical Journal*, May, 1878,) a case of syphilitic albuminuria, which is of great interest.

The patient was an intelligent German, sixty years of age, and was an inmate of the Louisville City Hospital, Dec. 1st, 1876. "He was a subject of general dropsy, and on the card over his bed was written, 'albuminuria.' His pale, waxy-looking skin, puffy eye-lids, constant indigestion, slight bronchitis, disturbed vision, hemicrania, pain in the back, muscular debility, and frequent nocturnal micturition, all confirmed the diagnosis, and examination of the urine showed it to be excessively albuminous, and abundant in tube casts and renal *debris*."

"Deriving no comfort from treatment, and indeed growing gradually worse all the time, and having no hope of recovery, he begged to be allowed to desist from treatment, and the request was granted at the end of two weeks."

The patient's nose had the "saddle-shaped" appearance, so often associated with tertiary syphilis, where the nasal bones have come away. This, with other indications of syphilis, decided the doctor to give the patient the *therapeutic test*. The doctor prescribed a scruple of the iodide of potassium, to be taken in skimmed milk or water, every three hours when awake—the doses to be increased ten grains each every day till iodism, gastric disturbance, or relief of symptoms should occur. He took on several occa-

sions an ounce of the medicine daily, and never had any discomfort from it. "He got iron and bitter tonics at the same time. His improvement was marked at the end of a few days. The throat rapidly healed; his strength, appetite and color returned, and the urine ceased to evince any sign of renal disease. In two months he was well."

The cases reported above show that organic syphilis is not detected in many cases by the physician, and it will never be known how many have died, or may die, where the cause of death is certified as coming from *morbus Brightii*, disease of heart, apoplexy, *phthisis pulmonalis*, *marasmus*, etc., but where in the dim background stands the grim monster, Syphilis.

They also show that when a proper diagnosis is made, what brilliant results follow the proper treatment.

1750 M Street, N. W.

ART. IX.—Aneurism of Vertebral Artery—Its Successful Treatment.

By E. M. MAGRUDER, M. D., of Charlottesville, Va.

"Aneurism of the vertebral artery is extremely uncommon because of the deep situation of the artery, the firm support of its walls, and its freedom from atheroma. It is rarely spontaneous or idiopathic, and is nearly always due to punctured and bullet wounds. Nearly every case recorded has been caused by traumatism, and only one has been found in which the cause was idiopathic. In this subject both vessels were affected.

"The diagnosis has heretofore been very unsatisfactory, as this affection is most liable to be mistaken for aneurism of common carotid, occipital, or ascending cervical arteries. The only method of diagnosis is by direct pressure, according to the method of Rouge, viz: 'Relax the sterno-cleido-mastoid muscle of the affected side by approximating its origin and insertion as nearly as possible, and then, inserting the thumb on one side and finger on the other side of the muscle, pinch the latter. This will compress the common carotid, and if pulsation does not cease in the tumor, the diagnosis of vertebral aneurism may be made.'"

Gross mentions two cases of vertebral aneurism, in which

the common carotid was tied, with the death of both patients. *Wyeth*, in an essay, reports five (5) cases of vertebral aneurism, in which the common carotid was ligated under the supposition that that artery was the seat of trouble, with a fatal result in all.

Ashhurst's *Encyclopedia of Surgery* gives twenty-two (22) cases of vertebral aneurism recorded up to 1884. Of these, eleven (11) were mistaken for common carotid aneurism and one for aneurism of inferior thyroid, with ligation of these arteries. Of these twenty-two (22), only two ended favorably—those of Moebus, of Germany, and Kocher, of Bern.

Treatment.—*Moebus* applied cold (ice) and direct pressure. The aneurism was consolidated and a cure effected.

Kocher enlarged the original wound with his fingers, removed the clots, placed a small pad soaked in perchloride of iron in the wound after hæmorrhage had ceased, sewed up the wound, and applied a dressing. Erysipelas followed, but the patient recovered. (*Ashhurst's Encyclop. of Surgery.*)

Gross suggests nothing in the way of treatment, but simply mentions the case of Moebus.

Ashhurst says "probably direct pressure and cold is the most efficacious of all non-operative measures. * * For vertebral aneurisms the treatment by compression must be tried. * * * As it is impossible to tie the vessel at the bleeding point, as there is nothing there for the ligature to grip, the inference to be drawn is, avoid operation unless it be forced upon the surgeon." He closes by calling attention to Kocher's case, and rather timidly suggests plugging the artery at the point of injury.

Gherini advises the trial of the compress, and proposes, in case this fails, "to lay bare the transverse processes above and below the wound, in spite of the danger of wounding the cervical nerves, and tie the artery in two places above and below the aneurism; and then, if this latter fails, to tie the vessel below the first and below the sixth cervical vertebral." A forlorn hope! This operation, in which it would be utterly impossible to avoid division of the cervical

nerves (among which is the phrenic nerve) is liable to be followed by after effects (such as paralysis of muscles, interference with action of diaphragm, etc.) so inconvenient and serious that the conservative surgeon will withhold his approval.

Wyeth proposes direct pressure, and says that, should this fail, deligation of the vertebral in its first portion *may* be effected, at the same time adding, "this is a very difficult operation, and has been rarely attempted. The only operators so far are Smyth, Parker, Alexander and myself." But he fails to give the result in any of these cases.

Now, in this operation of ligating the vertebral in its first portion, the operator dangerously approximates such important structures as the internal jugular vein, pneumogastric, phrenic and sympathetic nerves (all of which have, in fact, to be exposed and shoved aside in order to reach the vessel), and the common carotid, subclavian, and inferior thyroid arteries and subclavian vein, any one of which may be most easily injured or severed with dire results. And, moreover, even should the operation of ligation be successfully performed, there is still danger that it will not relieve the trouble, as the aneurism *may* still be fed on the distal side by the other vertebral.

That mode of treatment is always best which *cures* with the *least risk* to life; and I am inclined to the opinion that, when we come to consider the dangers attending ligation of the vertebral artery, we will be forced to the conclusion that wisdom and conservatism demand that some other method must be employed for the cure of this trouble.

Of twenty-seven (27) cases recorded (and these are all I can find in the literature at my command), only two patients were saved—about $7\frac{1}{2}$ per cent. In the study of these cases, this bad result is plainly due to two principal factors—

(1) The deep and inaccessible situation of the vessel, rendering diagnosis difficult and causing the almost impossible application of the ideal treatment of aneurisms in general, *i. e.*, the ligature.

(2) The errors that have been made in diagnosis, this being accounted for by the peculiar position and course of the artery.

With the light of past experience, it is certain that in the future greater care will be exercised in the diagnosis of such cases, and better success will surely follow.

The rarity of this affection, the gravity of the lesion, and the want of success in treatment sufficiently warrant the report of every case that comes under notice; and, with this as apology, I will report a case of vertebral aneurism that occurred in my own practice, and its treatment:

J. C——, a young farmer about 30, in excellent physical condition, in June, 1891, received a pistol shot wound in the neck, the ball entering at the apex of the left mastoid process, perforating the posterior wall of the pharynx, and lodging under the skin over the middle of right sternocleido-mastoid muscle (its direction thus being from left to right and forward), from which place it was immediately removed.

I saw him the next morning in consultation, and was told by his physician that there had been copious hæmorrhage from the throat, which, however, soon ceased spontaneously. Several small chips of bone were also removed from the wound in the pharynx. The external wounds quickly healed and the patient began to go out. At the end of four weeks I was again called and found him with the following symptoms:

(a) *Violent pains*, neuralgic in character, extending upward over the occiput.

(b) *A swelling* the size of half an orange, just below the left mastoid process, where the bullet had entered.

(c) *Eccentric pulsation*

(d) *Distinct bruit*

(e) *Pain and tenderness*

(f) *Fluctuation*

} in the swelling.

These, together with the position of the wound and seeming superficiality of the swelling, caused the diagnosis of traumatic aneurism of occipital artery, and an operation was advised.

The patient was brought to Piedmont Hospital of this city a week afterwards. The tumor had greatly increased in size, extending half way down the neck and giving great pain.

Under chloroform anæsthesia, I exposed the external carotid, occipital, and common carotid arteries, and applied pressure to each, but failed to arrest pulsation in the swelling. The diagnosis of vertebral aneurism was then decided upon, and an effort was made to expose the artery for ligation, by cutting down upon and snipping off with bone forceps the transverse processes behind the sterno-mastoid muscle. But the interference of the cervical nerves and the fear of injury to them caused this to be abandoned, especially as the enlargement covered such an extensive area, and its interior had been slightly invaded at the lower back part (without hæmorrhage, however, as the tough clot kept back the blood).

Then by a longitudinal incision two inches long the aneurismal cavity was boldly laid open from above downward, and all of the clot which it contained turned out. There was immediately a most appalling gush of bright arterial blood, which, however, was at once staunched by the rapid insertion of the fingers of the left hand into the bottom of the wound and pressure on the bleeding point. The stream of blood was plainly felt spurting from the vertebral column, leaving no doubt as to the diagnosis. The cavity was then quickly filled and packed with long strips of previously prepared bichloride gauze, and over this was placed a long, firm compress of antiseptic gauze and cotton, held in place by a tight bandage around the head and neck. At the end of about four weeks the whole dressing was removed. There was no pus nor hæmorrhage nor any enlargement, but a clean cavity with pink, healthy, granulating walls. The bony column could not be seen or felt. The walls of the cavity were then freshened and brought together by two or three deep sutures, and perfect union took place, leaving a linear cicatrix.

At this date, twenty months after operation, the patient is in fine health, and there has been no sign of recurrence.

Criticism.—The free incision into the sac should have been made as soon as the diagnosis was cleared up. My reply to this is that, not being able to find a precedent among writers on the subject, I feared uncontrollable hæmorrhage.

SUMMARY.

(1) Vertebral aneurism is very rare, and its treatment has been exceedingly unsuccessful.

(2) The causes of the lack of success are (1) inaccessible situation and (2) errors in diagnosis.

(3) Of the twenty-eight cases (mine the twenty-eighth) herein mentioned, three were cured and twenty-five perished.

(4) Of the three cases cured, one was treated by cold and direct pressure (Moebus), one by enlarging the original wound and using a styptic and bandage (Kocher), and one (my own) by a combination of incision, evacuation, packing and compression.

(5) Vertebral aneurism can be safely laid open and treated, the only danger being immediate hæmorrhage. The requisites for success are quickness and perfect asepsis.

(6) Treatment by incision, evacuation, packing, and compression is the safest, easiest and surest method yet devised for vertebral aneurism, and is bound to succeed.

ART. X.—What the General Practitioner Should Know about Diseases of the Eye.*

By FRANK TRESTER SMITH, A. M., M. D., of Chattanooga, Tenn.

PROFESSOR OF DISEASES OF THE EYE, CHATTANOOGA MEDICAL COLLEGE.

That there is a lack of knowledge in the profession regarding the elementary principles of ophthalmology, will hardly be denied by any one who is at all familiar with the facts. Our crowded college courses, and the feeling among students that they are not required in actual practice to know anything of the eye, owing to the multiplication of specialists, are largely responsible for this. Again, the subject is so extensive that it is difficult to decide where to leave off the study; and instead of mastering a few general principles with the more important facts, too often the matter is skimmed over, and a superficial knowledge of much is obtained instead of a thorough acquaintance of what is most necessary. It will be the object of this paper to define the minimum amount of knowledge of this subject which one

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should have before entering the practice of medicine. If he understands these things well, he will find it much better for his reputation, his pocket-book, and for his patient; for if he makes a mistake elsewhere the kindly earth will cover it up, but here an error will be a walking advertisement to his want of skill or lack of knowledge.

In the first place, it is not to be expected that every doctor should become a specialist, or in any sense competent to deal with all eye affections, but he should know enough to know his ignorance; secondly, it is not necessary for him to understand how to fit glasses, but he should know the main indications for the use of spectacles—*e. g.*, presbyopia, diminished vision, asthenopia, headache, functional nervous disorders. In the third place, he should not attempt to use the ophthalmoscope, for several reasons: it will not pay; he will not realize enough out of the cases to pay the cost of a good instrument; then there is the cost and time of learning. It would be cheaper for him to pay a fee out of his own pocket to a competent specialist. He could not keep in practice for this work. Most books on diseases of the eye have a chapter on the ophthalmoscope, which always seemed to me as worse than useless.

We can divide the cases under consideration into four classes: 1st, Those with impaired vision; 2nd, Those complaining of pain referred to the eye; 3rd, The inflammatory cases; 4th, The miscellaneous cases. Your patrons have a right to demand that you know something of these, and not depend entirely on the oculist. You will be compelled to give advice in all these cases, and you should know how to advise, and when it is necessary to call in a specialist. You should know that every case of impaired vision and any clear cornea should have the benefit of an expert examination, provided that there is any perception of light. The doctor should be able to test for perception of light. He should know that where there is no perception of light, or where the cornea is opaque, that it is not worth while to subject your patron to any expense for an examination. He should know that where spectacles are supposed to be re-

quired, that the oculist and not the travelling charlatan nor the optician is the proper person to whom these cases should be referred.

He should be able to diagnose between glaucoma and cataract as a cause for the poor vision, and not advise the former to wait until it gets ripe, with the result that a specialist be consulted when it is too late to preserve any vision.

In our second class of cases, in which pain is the prominent symptom, glaucoma is at once suggested. With the diagnosis of this disease, every practitioner should be familiar. It does not require any skill to diagnose increased tension (hardness) of the eyeball in a well marked case, and the other points of the diagnosis should be well understood. Pain in the eye without inflammatory symptoms is more often glaucoma than neuralgia. In some cases of glaucoma the reflex symptoms have predominated, so that cases have been treated for biliousness. You should know enough to prescribe myotics until an operation can be performed.

The general practitioner will be most often consulted in reference to our third class of cases, the inflammations. In all inflammations of the eye, atropine is indicated with the exception of the inflammations of the conjunctiva. Even here it will, as a rule, do no harm; so that in a case of doubt it would be best to use it, as the neglect of this agent may result disastrously. But the doctor should know that it is to be used with caution in all cases over forty years, and that it is positively contra-indicated in cases where there is any tendency to glaucoma. While many of the inflammations of the eye tend to spontaneous cure, and others would get well if treated on the above general principles, still it would be better to consult a specialist early, and carry out a line of treatment laid down by him, than to send him the case after all other resources are exhausted. The doctor should know the indications and the contra-indications of atropine and also of eserine.

In some cases it is difficult to diagnose between glaucoma and serous iritis. If it were iritis, and eserine or pilocar-

pine used to contract the pupil, the case would be made worse. If it were glaucoma, and atropine, or other mydriatic used, the result would be disastrous.

Under the fourth head are included all cases of functional nervous disorders, reflex and otherwise which may be benefited by wearing glasses, or by some treatment, operative or otherwise, of the eyes. This includes cases of asthenopia, headache, chorea, epilepsy, and all obscure nervous troubles. It is sufficient for you to remember that many of these cases have been relieved, and some cured, by treating their eyes.

Injuries of the eyeball should, as a rule, be referred to a specialist at an early date, and especially if there is a suspicion of a foreign body on account of the danger of sympathetic ophthalmia.

An endeavor has here been made to briefly outline the minimum knowledge of this branch which a general practitioner should have. More might be useful—for instance, the size and motility of the pupil will often aid in diagnosing cerebral affections or general diseases.

What has been given seems to be indispensable to any one who wants to practice medicine conscientiously.

Discussion.—Dr. Geo. Price said that while the outline for the study of this special line of medicine was a good one, the paper was not full enough. Cases frequently were sent to the specialist which should be treated by the general practitioner. This was especially true of diseases of the conjunctiva. He thought that every one should be able to use the ophthalmoscope on account of the assistance it sometimes gave in the diagnosis of general diseases, as in the case of albuminuric retinitis, where the eye lesion was often the first indication of the condition of the kidneys. General practitioners often diagnosed glaucoma where none existed.

Dr. G. C. Savage thought that the general practitioner should be able to diagnose iritis from conjunctivitis, and what was of more importance from glaucoma, for a mistake either way was likely to be fatal to the integrity of the eye. While glasses are not a panacea for all eye troubles, still they have a large field of usefulness, and their indications should be borne in mind. He illustrated a method of testing for muscular insufficiency.

Dr. N. C. Steele stated, as a rule, where we had a secretion of mucus or pus, the trouble was in the conjunctiva, while if the secretion was composed of tears the cornea or deeper structures were involved. What the doctor should know of these troubles would depend on his location. If where competent oculists were available, there would be less necessity for him to be posted along this line.

Dr. J. B. Cowan related a case of some obscure nervous affection where there was relief from the use of spectacles. He thought that the profession was much indebted to such men as Stevens for clearing up the etiology in these cases.

Dr. Smith, in closing the discussion, said that the paper might have been made much longer without exhausting the subject. He had not elaborated any of the points introduced. He would add, however, that it would be well if every one practicing medicine would understand the diagnosis between conjunctivitis and iritis.

ART. XI.—Malarial Hæmaturia.*

By JOHN N. D. CLOUD, M. D., of Newnansville, Fla.

It has been shown that bloody and black urine was recognized by Hippocrates and other ancient writers more than two thousand years ago. These investigations, however, related to all that class of malignant fevers which are invariably attended with hæmorrhage, and did not relate directly or exclusively to malarial hæmaturia. Whilst this disease, was not unknown to the Grecian, Roman and Arabian physicians, yet an examination of the medical literature of America since the establishment of medical journals during the past century, will lead to one of two conclusions, namely, that malarial hæmaturia was unknown upon the North American continent, and had no existence. Malarial fever, or hæmaturia, existed of course, but was not recognized as a distinct form of malarial fever.

It is worthy of note, that malarial hæmaturia, as a rule, claims for its victims those who have suffered from repeated

*Read before Florida Medical Association, Session in Jacksonville, April, 1893.

attacks of intermittent fever, or who have been exhausted by a prolonged attack of remittent fever; and while some of the symptoms, as the nausea and vomiting, deep jaundice and impaired capillary circulation, resemble those of yellow fever, yet there are material differences. Without doubt, the peculiar manifestations of this fatal disease are based upon alterations of the blood and organs, which establish a predisposition to congestion, structural alterations, and inflammations of certain organs, as the brain, lungs, bowels and kidneys, owing to the defibrinated state of blood.

In those cases of malarial hæmaturia which came under my observation during my stay in the Charity Hospital in New Orleans, a careful examination of the blood by Prof. Joseph Jones revealed great diminution of the colored blood corpuscles, with pigment granules and colored blood corpuscles. This condition continues throughout the disease. I shall give a synopsis of a few cases from my note-book :

Willie Maynard, a stout young man of twenty summers, a native of Georgia, came to Florida in 1884; had not been accustomed to early rising and working in our hammock lands. He had been advised by friends to be cautious and not expose himself to the poisonous atmosphere of the swamps, but to no avail. He had an attack of malarial intermittent fever in August, which exhausted him very materially. In September, he had a chill about 2 P. M., and sent for me. I did not arrive until four. When Dr. Meem and I entered, his mother exclaimed, "Poor Willie is compelled to die; he has had quite a hæmorrhage." We examined him; found the liver and spleen congested, tongue coated on base, indicating malaria; pulse quick, but steady, about 120 per minute, showing contraction of arteries; respiration hurried, 25 per minute; skin hot and dry; nausea considerable. Ordered hot bath with mustard; afterwards wrapped him in blankets, and he perspired very freely. Gave him calomel, ipecac, and bicarbonate of soda in minute doses every hour, though the nausea was so incessant that it was almost impossible for him to retain anything. Ordered mustard plaster without any material benefit. I saturated a handkerchief with chloroform, and applied it over his stomach, which relieved him partially. Two hours after the first hæmorrhage, another as copious as

the first. I gave him infusion digitalis, acetate potash; also digitalis leaves were applied over kidneys. Gave the above mixtures every three hours, or sufficiently often to keep kidneys acting.

Next morning, I found the young man very restless, nervous and exhausted from loss of so much blood, though temperature was not so high—only $102\frac{1}{2}$ F.; pulse not so rapid, but rather full—only 100; bowels moved once, kidneys acted twice during the night—about four ounces at each sitting. To increase the flow of urine, I gave larger doses of the diuretic mixture; gave him more calomel, ipecac and soda.

In the afternoon, he had passed a considerable quantity of urine; also his bowels moved several times; but the skin had not changed from the deep yellow color.

On the third day, urine had cleared up, though he still had fever. He was ordered five drops of Fowler's solution every four hours. Sulph. quinine was not given, because it would very likely bring on another hæmorrhage. Dr. Broose, of Thomasville, invariably gives quinine, about ten grains every three hours, or until the patient is thoroughly under its influence.

I left, fully convinced that he would have another hæmorrhage. Sure enough, in an hour and a half he had another. I stopped the quinine, and gave arsenic and yerba santa. He did not have another hæmorrhage; continued to improve, and made a rapid recovery.

CASE II.—I received a telegram from Georgia, seventy-five miles from Jessup. I left home at 4 o'clock, and arrived next day at 2 P. M., being detained. When I arrived, I found the woman with considerable fever, skin yellow, urine suppressed; temperature 102° F., pulse 95; tongue coated brown. Dr. Bryan said he concluded that it was a malarial type, and ought to have large doses of quinine; moreover, gave tincture muriate iron to control the hæmorrhage. She had not passed urine for forty-eight hours. Then I suggested to the Doctor a hot bath, which was used, digitalis leaves hot as could be borne over the kidneys; introduced catheter in the bladder to see if it was retention, but not a drop came. Gave her a brisk cathartic, thinking perhaps the kidneys would be aroused slightly, but it had no effect. I gave her diuretics all the while; also diaphoretics; the skin acted nicely. I spent three days with her, and during that time not a drop of urine was passed. The morning I left she sat up in bed, and drank a cup of tea and ate

a soda cracker, and expressed her appreciation to me. All seemed to believe she would soon recover, but I told the brother there was no hope. Of course, he was very much surprised. She died that evening. Why she did not have uræmic convulsions I do not know.

I have treated quite a number of cases of this malignant type of malarial fever, and have never given quinine until the hæmorrhage had subsided, and the skin had begun to resume its natural hue. I have been called in consultation with physicians of ability, and have never seen a single case recover where quinine had been given at the beginning, and my experience has been considerable. Dr. V. D. Miller, of Jacksonville, practiced in the same town, and can testify to the satisfaction of this treatment.

ART. XII.—Hypnotism.*

By **MATTHEW M. SMITH, B. Sc., M. A., M. D.,** of Austin, Texas.

RESIDENT PHYSICIAN CITY AND COUNTY HOSPITAL.

As the science of medicine advances, we are taught more and more not to rely merely upon bitter drugs in the treatment of disease. We now realize the value of hygiene, feeding, nursing, and the like. It has only been a few years since physicians denied the value of electricity, baths, massage, etc. But at present the medical man that does not include them among his valuable aids, is not properly equipped to battle with disease in its many forms.

Hypnotism has been studied during the past few years by many of our best thinkers and scientific investigators of Germany, France, England and America, and they have succeeded in placing it upon a thoroughly scientific footing. And as many of our very finest physicians and neurologists make use of it in their daily practice, it is high time that we, as physicians, should at least acquaint ourselves somewhat with its manifestations, and learn something of its therapeutic value. I do not claim hypnotism to be a

* Read before the Texas State Medical Association in May, 1893.

panacea; neither do I pose as an enthusiast; but this much I do know, that before I gave the subject much study, I believed it a fraud and without a legitimate use or even existence. I now believe it can be made to play an important part in the healing of the sick.

Hypnotism, we might say, is as old as the world. It was used in the service of mysticism, prognostication and religion by the priests of ancient Europe, old Indian fakirs, Greek oracles, Roman sibyls, and the Mediæval magicians; but with the establishment of Christianity disappeared its divine origin, and it was then thought to be the workings of the devil, as evidenced by the execution of the witches in the Middle Ages, who were able to easily get under the influence of hypnotism. It was at one time called mesmerism; at another, animal magnetism; again electro-biology; and now hypnotism. All are but manifestations of the same thing regardless of the name.

Hypnotism was first brought prominently before the people by Fredrich Mesmer in 1776, a physician of high standing, who, after much experience with it, finally located in Paris and established a baquet or place of treatment, to which large numbers flocked for treatment. Sitting in this darkened room with joined hands, listening to strains of sweet music, and surrounded by an atmosphere of mystery, many would feel its effects and be benefited by suggestions made at the time.

James Braid, of Manchester, the English surgeon, published in 1842 a work entitled "*Neuryphology*," which succeeded in removing animal magnetism from obscurity and brought it into a scientific light. He investigated the subject in a scientific manner, and did much towards its solution and advancement. But it remained for Prof. Charcot, the eminent neurologist of La Salpêtrière, in Paris, to admit and establish hypnotism upon a purely scientific basis. He studied the subject largely from its physiological standpoint and as manifested in the diseased. At about the same time the Nancy School of Investigators, with such men as Bernheim, Lièbault, Beaunis, and others at its head,

studied the subject from its psychological side, and showed its practical value as a medical and educational agent and its importance in medical jurisprudence. They, with Prof. Charcot, established it as a science. Lièbault, of Nancy, pointed out its value in the treatment of disease, and has used it constantly for the last twenty years in his practice. Many are the renowned scientists that have contributed to its literature. In 1886 a hypnotic journal was published in France, and of late years many works have been written setting it forth in its true light.

Hypnotism is the science of the sleep-like state, which manifests itself by various physical and psychical phenomena, and is induced, in those susceptible, by some special influence exerted through the mind by a suggestion. Hypnotic sleep does not differ materially from natural sleep, and is in reality an artificial and modified form. It is induced by keeping the idea prominently before the mind that sleep is coming on, which is done by means of suggestion alone or in conjunction with the fixation of the eyes upon an object, by stroking, pressure, etc., which only cause fatigue and assist suggestion—the all-important element. There are various methods used in producing hypnotism, but they all involve the two great principles—the fixation of attention and the influencing by suggestion.

I shall mention very briefly the two most common methods employed in inducing hypnotism—Braid's and that of the Nancy School.

Braid caused the patient to be seated and gaze steadily at a bright object, fixed very near and just above the eyes, thereby causing the eyes to be turned inward and upward, which position soon causes fatigue. After a few minutes the suggestion is made that the eyes are becoming heavy, that he feels stupid and sleepy, and by deepening the idea that sleep is coming on, by means of suggestion every few seconds, you soon notice sleep really appearing, and you then command, "You are asleep and cannot open your eyes," and you find such to be the case. Now by deepening

the hypnotic state by suggestion, you may experiment *ad libitum*.

Nancy's method: Patient sits opposite the experimenter and is told to think he will soon go to sleep, and to think of nothing else; after a few minutes he is told his eyes are closing, he is fatigued, his eyes quiver more and more, he feels tired, his arms and legs are becoming heavy and tired, he is now sleepy, he is passing into a quiet sleep, and he is sound asleep (command). The time required for all this varies with the subject—from one to fifteen minutes usually—but those who have been frequently hypnotized may go under it very rapidly, and even at once by a command.

The dehypnotizing or awakening from the hypnotic sleep is very easily done. The best way is by suggestion. Say in a commanding tone, "You have been asleep long enough; wake up, open your eyes, you are awake." Or, again, you may allow the subject to remain quiet and wake as from natural sleep. The symptoms of hypnotism are very characteristic and varied, depending on the state of hypnosis whether it is slight or deep, the mental conditions of the patient, and the ability and experience of the hypnotizer.

Between natural sleep and profound hypnotism there is an unbroken chain of intermediate states, as evidenced both physically and psychically. The effects of hypnotism are shown more or less upon all the organs of man. Not only are the motor and sensory systems affected, but likewise the brain and its functions, and even the respiration, circulation, nutrition, etc. But the most remarkable and important effects are shown to be in the mental state.

Physical effects: The muscular system shows a striking sensitiveness to hypnotic influence, varying, of course, with the state. There may be relaxation, extreme irritability, disposition to contractions, spasms, tetanus, etc. For example, in the lethargic state, there is general muscular relaxation and the body is limber, resembling collapse; or, in the cataleptic state, there is a peculiar rigidity which holds the limbs and body in any position you place them, with ab-

normal endurance. You may have a tetanized condition of the entire muscular system, and you may suspend the subject upon the backs of two chairs, with only the heels and head touching, and he can remain for some time in this position with little evidence of fatigue. This state you often see abused in side show and dime museum exhibitions.

In all the stages of hypnosis, except the very slightest, you have insensibility to pain from pricking, burning, and such means. In the lethargic state, all senses are inactive except hearing, which may also be diminished. In cataleptic state, the senses are a little more active, and ideas can be imparted by them in a crude form. In the somnambulistic state, everything is caused and varied by suggestion of the experimenter. Charcot divided the hypnotic state into three stages—cataleptic, lethargic, and somnambulistic. I shall briefly mention the characteristics of each.

Cataleptic state: Immobility is the most characteristic symptom; eyes are open, tendon reflexes abolished, complete insensibility to pain, statue-like attitude, limbs retain difficult positions without evidences of fatigue, vision and hearing active enough to be slightly influenced by suggestion.

Lethargic state: In its beginning may show epileptic symptoms, as rigidity, foaming of mouth, etc. There is complete insensibility of skin and mucous membranes; increased irritability of motor nerves; insusceptibility to suggestions or imparted hallucinations; eyes wholly or partly closed, usually trembling of lids; respirations deep and quickened.

Somnambulistic state: The one most interesting psychologically—the *magnetic sleep*; the eyes partly or wholly closed; some insensibility to pain; muscular irritability normal, but the senses quickened to a high degree; mental faculties highly sharpened; answers questions when asked. This is the state where suggestion has full sway, and makes the subject act at the will of the commander; yet with it he displays a certain independence or personality. It is in this state that we have the psychical effects of hypnotism,

and they are the most varied and remarkable, often appearing mysterious and incomprehensible, which accounts for the long use made of them by charlatans as superhuman manifestations. These phenomena are all produced by suggestion given in some form. I shall not discuss the symptoms of the somnambulistic state further under this head, but they will be brought out in discussing suggestion—the all-important element in hypnotism.

Suggestion may produce phenomena that often seem incredible, and even miraculous. A suggestion to the hypnotized is but a dream, produced and directed by the experimenter. The same principle was admirably shown, in natural sleep, by Maury's experiments upon himself. He had a person to remain near him in the evenings, and as soon as he fell asleep to excite certain sensations in him, and awake him after time for dreams. Cologne to his nose caused him to dream of a perfumer's shop, where he frequently visited. The nape of his neck was gently pinched, and he dreamed of a blister there and the physician who treated him in childhood by that method.

Suggestion is purely a psychical influencing, and, as the roads to the centres of ideas and imagination are many, we have, therefore, several kinds of suggestion; but the best, most effective, and direct manner is by spoken words. The somnambulist is told something is so and so; that he is seeing, hearing, or feeling this or that; that he will do a certain thing; and you find he believes, sees, hears, feels, and does just as told. Yet you find he is more than a non-entity; he possesses a personality, an ego which acts to a certain extent. The suggestions are usually executed at once; but if they be things to which he objects doing when in the wakeful state, he will hesitate and even refuse to proceed, and if he does, he devises excuses for his peculiar action. A devout Catholic will not violate his creed. You see the same thing in other states. The delirious patient may talk unconsciously of anything in his daily life except his vows of Freemasonry, which he keeps a secret even after being questioned about them.

Suggestion introduces, cultivates, and confirms an idea in the mind of the subject. This idea forms an image, and this image produces a sensation, and the subject accepts and believes it, thinking it original with himself, and he acts accordingly. Command the arm to be stiff and it becomes so. You can make him drink the most nauseous draught and think it champagne; smell strong ammonia and believe it perfume. Blisters can be raised with postage stamps; cold iron made to burn and even cause a sore. Tell him to listen to the band of music and he is delighted; to taste castor oil and he frowns; to see the picture of a relative on a blank card and it is so; that he is nauseated and he gags, etc. With each hallucination, produced by suggestion, appears all its accompanying elements and surroundings, and this panoramic scene may be changed as rapidly as in our dreams—for you know men have lived over years of their lives in dreams of ten minutes. In sleep, the faces and voices of the departed are seen and heard years after we had forgotten their individual characteristics in the wakeful state. Post hypnotic suggestion is where we suggest to the hypnotized that they will perform an act at a specified time in the future when awake, and nothing more is thought of it until the suggested time has arrived, when the idea suddenly appears and they act upon it as original, and often think it strange why they should do such peculiar things; yet they cannot help it.

Mental suggestion, or *telepathy*, has been proven by experiments. To illustrate: While the patient is hypnotized, say to him that when he awakes he will do as those around him are thinking. Then a suggestion is written and shown to all in the room, and when he awakes they all think intently upon this one thing, and he does what has been written. This is *thought-transference*—the direct action of one mind upon another; a direct communication of ideas without the use of words, signals, and such to form suggestion. These phenomena were first noticed in playing what was called a "willing game," which was often played at social gatherings. One of the company was blindfolded and brought into the

room, and he would often do largely what those around him had wished. We have all seen manifestations of the same thing, in a modified form, when at the theatre, for example, and we see our friends and want them to look in our direction; we can have them do so by willing strongly to that effect, when we notice they at first become restless and disturbed, and finally turn and look directly at us.

Who can be hypnotized? You might say most any one, if they give their consent freely and you repeat your attempts (*i. e.*, those that have minds and can concentrate their attention). Hence, very young children, idiots, and the insane cannot be hypnotized. Sex and nativity make very little difference. The hysterical, as a rule, are easy subjects to be hypnotized, because they are very credulous, and their minds, when fixed by suggestion, does not wander or doubt.

The state of consciousness in the hypnotic state. It is more or less abolished in the cataleptic and lethargic states. But in all forms of the somnambulistic state, except the deepest, there seems to be a peculiar duplication of consciousness, into a judging or primary consciousness on the one hand, and an experiencing and acting consciousness on the other. We often see this clearly demonstrated in our dreams. The judging or primary consciousness tells us we are only dreaming, and to take no notice of the impressions made; but the secondary one accepts, participates, and is affected by what it believes to be real phenomena. Often in hypnosis the same thing is seen. The subject knows he is acting in a ridiculous manner and is the object of experiment; yet he does things much to his displeasure and contrary to his wishes. With the deepening of the hypnotic state, the primary or judging consciousness gradually disappears, until it cannot be recalled except by suggestion given during hypnosis, to the effect that, on awaking, what has occurred during the hypnotic state can be recalled.

I shall instance a case where the primary consciousness is in authority; yet the secondary one acts slightly. Render the right arm thoroughly analgesic by means of suggestion and let the remainder of the body be normal. Then by

the use of a screen isolate this arm from view and place a pencil in the hand with paper prepared for writing, and while the subject is busily engaged in conversation, stick this hand and arm with pins and do violence in other ways, and you find it will write about its maltreatment and punishment. This is *automatic writing*, and has been much studied by Prof. James, of Harvard, and the illustration mentioned is one of his experiments. Many people are able to listen to a conversation and read intelligently. We have speakers that are making a set speech and a question is asked, and they continue with their speech and reason out a reply at the same time; or while listening to one question they think up an answer to another. Richet advances the hypothesis of an unconscious ego which gives attention, perceives, reflects, and reasons unknown to the conscious self.

In diseased states, we have records of patients that have lost all consciousness of their past life and have to learn again by experience, and require a new education, and have no knowledge of their former selves; and after months or years they have been known to return to their former state and forget everything acquired in the latter. Friends made in one state were strangers in the other. If educated as a fine musician in the one, could not play a note in the other. A devout Christian in the one and a wicked sinner in the other.

Dessoir believes many things are done unconsciously that are of mental origin. Bonkworth could add up rows of figures and converse at the same time. Voltaire wrote poetry in his sleep. Mathematicians have solved the most difficult problems in their dreams.

The hypnotic state should not be considered as being mysterious or superhuman, and only as manifestations of what we all daily employ in a less degree. It can be largely explained by what is seen ordinarily in the wakeful state and in our normal sleep and dreaming state. It is true that we cannot satisfactorily explain all the phenomena seen in the deeper hypnotic states, but we must remember

all sciences are making advances and have many things unexplained.

The anæsthesia and analgesia seen in the hypnotic state are often present in the wakeful state when the attention is fixed. The interested student may not feel the prick of a pin. The aching tooth is relieved by directing the attention elsewhere. Surgeons may employ minor surgery with little pain if the thoughts are fixed upon something else. Marching does not tire half so much when music engages our attention. The hunter is not fatigued because his attention is fixed upon game. Soldiers in battle may not feel the most painful and serious wounds.

Hallucinations in hypnosis have their counterpart in the normal state, and they are caused in this way: We have an idea produced by some means; this produces an image, though false, yet we may think it real, and as a result we have all the accompanying phenomena to appear and confirm the erroneous belief. We look for, expect, and often find that which we imagine, although it is not present. This explains the false deductions at times made by our most thorough and painstaking scientists. Chalk will produce sleep if the patient believes it to be morphine. Bread pills have caused copious discharges. We expect sleep at a certain hour, and at that time feel drowsy.

Men have a proneness to be influenced by others through ideation and to believe much without making logical deductions. Newspapers make men believe contrary to their fixed ideas and desires by repeated use of this element.

Hypnotic suggestion is only arousing by word or gesture in the mind of the hypnotized, and this image does the rest, just as we act upon an idea in our every day life. The suggested idea acts more quickly and with less reason, because the attention is concentrated and there is a clear field for action.

Normally the idea of an act tends to produce it. We can think pain into a particular locality. Thinking intently of words often causes their unconscious utterance. Delicate instruments have shown unconscious movements

of the finger from thoughts. Whispering near a sleeper often causes him to dream in the same channel.

Post-hypnotic suggestion has its prototype in natural sleep. We are able to wake at an unusual hour to catch a train. Mothers wake at regular hours to give medicine to their children. In sleep we do not hear the passing of a wagon, the striking of a clock, or the blowing of a whistle; yet we at once hear the report of a pistol, the sound of a fire alarm, or the step of a burglar. You agree to visit a patient at a certain hour, and you think no more about it until about that time, when the idea suddenly appears to notify you. I might continue and enumerate many ordinary states that are but a modified hypnotic condition, but time will not permit.

Some tell us the hypnotic state is only an assumed condition. But if you have seen subjects under its influence, you would say it would require a mind of a Shakespeare and the acting of a Booth to simulate so rapidly and perfectly. You can make the subject smell strong ammonia and believe it cologne; receive the electric brush without pain. Any one familiar with its symptoms can detect fraud at once, just as you diagnose a diseased condition.

Owing to the two-sided condition of man's brain and cord, as shown anatomically and physiologically, we are able to have unilateral hypnotism; *i. e.*, affect only one side of man, or even isolate more and act upon a single centre and cause it to act without interference with the others. How valuable this must be to the scientific physiologist and psychologist!

The hypnotized, as a rule, only act upon the suggestions of the hypnotizer, and others that direct them are not noticed. This is called "rapport," and is explained in this way: The attention is fixed and focalized by the suggestions of the hypnotizer, and those given by others fall without this focus of consciousness and have no effect.

Owing to a lack of knowledge, the mystery and depth of this subject, I have spoken more at length concerning its history and phenomena than I otherwise should have done.

I shall be compelled to hasten over its more practical uses as a medico-legal question and as a therapeutic agent.

Criminal uses may be made of hypnotism, and theft, robbery, rape, and even murder may be committed through its influence. You may suggest to a patient that he owes you some money, make him believe it and give you a note for the same; may cause wills to be drawn up in favor of yourself or friends; have bank checks signed that are made out in your favor; have crimes acknowledged that are not committed; give testimony contrary to the facts in the case; and may even make them commit murder, as illustrated by causing a friend to be shot with a blank cartridge and a relative stabbed with a paper dagger. Criminal suggestions have a much more powerful influence upon those inclined to evil ways than upon the morally courageous. I doubt whether an upright citizen could be made to commit a punishable crime.

Only graduates of medicine should be permitted to use this important agent, and then be confined to its legitimate uses in the treatment of disease. We should no more allow traveling charlatans to exhibit its peculiar effects before the public than we would permit them to illustrate the effects of morphine, chloroform, and strychnine by placing individuals under their influence.

I only mention a few of the legal questions that might arise from the use of hypnotism. A study of the subject will show that crime may have this for its cause as well as insanity, and in some countries they have at present laws to regulate its use.

Hypnotism as a remedial agent. Suggestion plays a very important part in normal life. It is the great principle made use of in the teaching of children—the influence that men exert over one another for good or evil. We must acknowledge and make use of the great influence mind has over body, for as Alexander Bain says, “The stare of astonishment, the quivering of fear, the frown of anger, all indicate the connection of body and mind. The martyr, the

saint, the blessed virgin and Saviour Himself manifest their nature by movements of framework."

We have no imaginary diseases, but diseases due to the imagination, and accompanied by real functional disturbances. They are developed under the influence of spontaneous or deliberate suggestion, and can be cured by the same suggestion acting in a contrary direction. If exhausted from exercise of the body, the mind does not work clearly. Sudden outbursts of anger upset digestion. Prolonged mental labor brings on disease of the body. I briefly mention these facts to show you the value of considering the mind in the treatment of disease. Station men along the route of a susceptible individual; let them in turn refer to his sickly appearance, and the strong, healthy man can be made to take his bed. Make a patient think he is better and you notice an improvement. A belief in a particular medicine aids in its benefits. The use of asafœtida for infection, the buckeye for piles, and rings for rheumatism may be explained in this way. A large part of the homœopathist's success is due to mind influence.

Hypnotism should be used as judiciously as any of our drugs, and only in cases indicated. Use it in conjunction with other treatment when deemed advisable, and before awaking the patient, suggest there will be no evil after-effects. Many physicians have used it for years without evil results and with remarkable benefits.

Conditions that are cured or benefitted by hypnotism: All pains that have no anatomical lesion, as headaches, ovarian, rheumatic and neuralgic pains, sleeplessness and hysterical conditions, and many disturbances of menstruation, alcohol, opium, and tobacco habits may be cured by its use. Neurasthenia, stammering, and nervous disorders of sight are benefitted by it. It may be used in minor surgery and labor to diminish pain. In treatment, many sittings may be necessary in order to get the beneficial results desired. Some physicians will have much better success than others with its use, just as some surgeons have a more skillful use of the knife than others.

Experience, tact, the ability to judge human nature, and psychological knowledge all aid in our success. With many your first attempt fails, but with repetition the susceptibility to hypnotic influence is largely increased, and success may later attend your efforts.

In conclusion, I wish to say that when mental impressions are fully understood in the cause and cure of disease, psychology will be found as important as physiology, and will then be given a place in our medical colleges. We will all see the day when hypnotism will be considered much more valuable as a therapeutic agent than many of the drugs lauded in our medical journals at the present time. I have been largely assisted in the preparation of this paper by Drs. Moll and Bjornstrom's works on Hypnotism, Binet and Fèvé on Animal Magnetism, Prof. Lefevre's article on Hypnotism, and other works.

Clinical Reports.

Case of Ascites, the Result of an Ovarian Cyst, Bursting into the Peritoneal Cavity—Tapped Nineteen Times—Drawing off from Four to Five Gallons of Fluid at Each Tapping.

By A. B. PIERCE, M. D., of Weldon, N. C.,

EX-PRESIDENT MEDICAL SOCIETY OF STATE OF NORTH CAROLINA, ETC.

Some time in the year 1872, a colored woman, named M. S., married, aged about 30 years, presented herself to Dr. M. A. Willcox and myself, with an enlargement of the abdomen, which we diagnosed as ascites, from the bursting of an ovarian cyst. For the purpose of immediate relief, we proceeded to empty the contents of the sac, by tapping two inches below the navel, in the median line from the navel to the pubis, which relieved her of about five gallons of fluid. Once every year, but one (when there was an interval of two years), she was tapped by Dr. M. A. Willcox, who lived in Halifax, where the patient resided, till 1880,

when Dr. Willcox died. About the same quantity of fluid was taken at each tapping.

After the death of Dr. Willcox, it fell to my lot to continue the tapplings, which I have performed every year since, with the same results. The patient is still living, and, with that exception, is enjoying good health, and still able to attend to her household duties, and washes and irons for a subsistence.

I expect to tap her again in a few months, for the twentieth time. The question naturally arises whether it would have been better to have operated in the first instance, and removed the tumor, or to have adopted the course which has been pursued? As far as I am concerned, I am satisfied with the results, the life having been prolonged twenty-one years, with reasonable expectation of many more, and the patient still enjoying reasonable health. Probably in some instances, we had better "bear the ills we have, than fly to others we know not of."

It is farther worthy of remark, that the operation has been performed with the common thumb lancet, and the fluid drawn off with a silver female catheter, which I invariably use in all cases of ascites, instead of the aspirator, and trocar and canula. I prefer it because it creates less pain, and appears less formidable to the patient, thereby creating less fear of the operation. The wound heals more rapidly, thereby lessening the tendency to inflammation, by the exclusion of the air.

The points in the case reported are: the uninterrupted health of the patient; the tardiness of the filling up of the cyst; and the length of time she has survived, and is still likely to survive.

Dr. M. C. Strickland, of Salem, Va., writes: "I regard your *Burgess' Compound Tincture of Four Chlorides*, or *Tinctura Mutationis Composita*, as being the most effective and elegant preparation of its kind made, and will use it in my practice."

CASE XVIII.*—A Case of Complete Bony Occlusion of One Side of the Nose.

By JOHN DUNN, M. D., of Richmond, Va.

CHIEF OF CLINIC OF RICHMOND EYE, EAR, AND THROAT INFIRMARY.

Miss G., of Louisa county, Va., aged 23. Symptoms: accumulation of mucus in the right side of the nose, and, as patient is unable to force any air through this side, she finds it extremely annoying to be obliged to wait until a sufficient quantity of mucus has accumulated that the nose may overrun or the secretion fall out through the action of gravity; further, she complains that her throat is constantly dry and the seat of unpleasant sensations, has a sore feeling, etc.

Miss G. has no recollection of having had nose trouble in her childhood. A letter from her father, a physician, can throw no light upon the case. Examination reveals the following condition of affairs: When the left nostril is closed by pressure upon the ala, no air can be forced through the nose. *Right nose.*—Anterior rhinoscopy reveals a quantity of thin, sticky, white mucus on the floor of the nose. This mucus has no purulent characteristics, but seems to be the normal nasal mucous secretion, from which most of the water has evaporated. The inferior turbinate for its anterior two-thirds is normal in appearance; its posterior one-third appears to be absent, or so slightly developed as not to be seen. The middle turbinate, for its anterior one-half, is normal in position and appearance; its posterior one-half appears to be absent, as does also, for an extent not to be made out by anterior examination, a certain proportion of the posterior ethmoid cells in the neighborhood of the superior turbinate. Posteriorly is seen a shining membrane, redder than the rest of the nose; is hard to the touch of the probe, and to the knife point gives the sensation of consisting of bony tissue. Unfortunately, the air spaces of anterior part of the nose do not allow a more precise view of the posterior region. The intra-nasal mucous membrane of the right side is normal in appearance. Posterior rhinoscopy shows that there is a membranous occlusion of the entire right side of the nostril, from the floor to the roof. Externally this partition wall begins just posteriorly to the Eus-

* The numbering of these cases refers to the order in which they are being selected for Report and Remarks from the Clinic of the Richmond Eye, Ear and Throat Infirmary.

tachian tube mouth, with whose mucous covering it is contiguous. Interiorly this partition grows from the septum about one-fourth or half an inch from its posterior border. Superiorly it is attached close to the posterior upper boundary of the nasal cavity; the partition then extends downward and a little forward to floor of the nose. The posterior surface of this partition is slightly paler than the adjacent mucous membrane, and is smooth, save near its upper margin, where there is apparently a small hole one mm. in circumference. This hole, however, must be a blind one, as no air can be forced through it. The posterior aspect of the septum is normal, and alike on both sides. The septum is straight. *The left nose*—Anteriorly, hypertrophy, with tendency to myxomatous degeneration of anterior end of middle turbinate, which lies against the septum. Posteriorly, hypertrophy of adenoid layer of mucous membrane of middle turbinate. In other respects normal. Nasopharynx and Eustachian tube mouths normal. *Hears equally well with both ears.* Hearing is good, although both drum heads are more or less retracted. *V. O. D. and O. S. $\frac{1}{15}$.* Bridge of the nose shows greater development on right side; nose turned somewhat to the left. Upper teeth have been lost through decay. *No visible difference in the development of the two sides of the face.* Sense of smell is absent on the right side; patient cannot detect the odor of iodoform even when it has been put in a probe and inserted into upper part of the right nose. The septum is fairly straight, but hypertrophy of its lower part for its anterior three-fourths prevents the use of a drill. Attempts were made to force several different instruments through this membrane; these attempts were failures. When, finally, a very small, narrow bistoury, with a long handle, was forced through, it was found that a direct line from the front of the nose would, owing to the hypertrophy of septum in passing through the bony membrane, also pass through the Eustachian tube mouth beyond. The hypertrophy of the septum was accordingly removed with a saw. A special drill was then ordered. With the aid of this a hole was forced through the occluding membrane, which, at its lowest part, was from one-fourth to one-half an inch in thickness; centrally this membrane was thinnest, being thicker towards its septal side. With the aid of a mastoid drill and nasal saws, this opening was enlarged until the patient obtained a fair degree of breathing space through this membrane. As the patient's general health was not good, and as not a

few difficulties were experienced in obtaining any permanent opening in this bony membrane, the patient was advised to return home and have the hole further enlarged when her health became better.

The growth was probably congenital. It is of interest to note that entire posterior occlusion of the right nose from birth has had no appreciable effect upon the growth and shape of the right eye or ear.

Correspondence.

Sexual Perversion—Correction of Remark by Dr. Lydston.

Mr. Editor,—Having read with much interest the open correspondence between Drs. Hunter McGuire and Frank Lydston, in the May number of your journal, I ask your permission to correct an error which appears in the letter of Dr. Lydston, concerning the "Babylon" investigation by Mr. Stead, late editor of the *Pall-Mall Gazette*. He writes: "Relative to this form of sexual perversion (the raping of young girls), I will call your attention to the *Pall-Mall Gazette* exposures in London some years ago."

It is quite true that Mr. Stead made dreadful and horrifying accusations of a general character some years ago against men in good social position in London, but when action was taken to try the truth of the assertions and to bring Mr. Stead's accusers before the defamed, the whole case broke down. Mr. Stead's sole witness was a retired brothel-keeper, and when she was driven from her generalities, she took refuge in one case—that of a girl ten years old; and on further hearing, the father and mother of the child, and the surgeon who examined the child, disproved the assertions made by Mr. Stead's witness.

The fact was, that Mr. Stead, always looking for sensational news, and being of a highly emotional temperament, fell a prey to a lying, money-loving, filthy-minded woman. The journal lost £5,000, and at once fell in the estimation of the public.

I have no wish to enter into the controversy, but I may say that in the production of my pamphlet, "*Plural Births*," in 1890, I had occasion to make a long and careful search through medical literature, and of the whole number of quadruplets and upwards, the children were, without exception, born of Argan or semitic parents.

Allow me to add, that such anthropologists as Tylor, Spencer, Buckland and Lubbock, ascribe polygamy to the desire to secure farm hands rather than to a gratification of lust.

Yours truly,

GEORGE FOY, F. R. C. S.

7 Cavendish Row, Rutland Square East, Dublin.

May 20th, 1893.

Book Notices.

International Medical Annual and Practitioner's Index for 1893. Edited by thirty-eight department editors—European and American—specialists in their several departments. P. W. WILLIAMS, M. D., Secretary of Staff. 8vo. Pp. 626. Illustrated. \$2.75. E. B. Treat, Publisher. New York.

The eleventh yearly issue of this valuable one-volume reference work richly deserves the enviable reputation which its predecessors have made for selection of material, accuracy of statement, and great usefulness. The corps of editors is representative. Numerous illustrations—many in colors—make the "Annual" more than ever welcome. Part I comprises New Remedies, with an extended Review of the Therapeutic Progress of the Year. Part II, the major portion of the book, considers New Treatment, and is a retrospect of the year's work, with several original articles by eminent authorities. The third Part is made up of miscellaneous articles, such as Recent Advances in Sanitary Science, Improvements in Pharmacy, New Inventions, Books of the Year, etc. The arrangement of the work is alphabetical, and, with its complete Index, makes it a reference book of rare worth. In short, the "Annual" is a recapitulation of the year's progress in medicine, serving to keep the practitioner abreast of the times.

Manual of Chemistry. By W. SIMON, Ph. D., M. D., Professor of Chemistry and Toxicology, College of Physicians and Surgeons, Baltimore, etc. *Fourth Edition, Thoroughly Revised.* With 44 illustrations and 7 colored plates, representing 56 Chemical Reactions. Philadelphia: Lea Brothers & Co. 1893. 8vo. Pp. 493. Cloth, \$3.25.

That a fourth edition should be demanded within a year after the publication of the third shows the great favor with which this "guide to lectures and laboratory work for beginners in chemistry" has been received and adopted as the "text-book specially adapted for students of medicine and pharmacy." While the principles of chemistry are taught in this as in other first class text-books, the author has made many additions, which fit this specially for the pharmacist and physician. Thus, all chemicals mentioned in the U. S. Pharmacopœia are included in this work, and, when of sufficient interest, they are fully considered. Again, Part VII, devoted to physiological chemistry, includes a great deal of new matter, representing the most modern methods for chemical examination in clinical diagnosis. The decimal system is strictly adhered to.

Naphey's Modern Therapeutics—Medical and Surgical—including Diseases of Women and Children. *Ninth Edition. Revised and Enlarged.* VOL. II. **General Surgery, Gynæcology and Obstetrics.** By ALLEN J. SMITH, M. D., Professor of Pathology, University of Texas, Galveston, etc., and J. AUBREY DAVIS, M. D., Assistant Demonstrator of Obstetrics, University of Pennsylvania, etc. Philadelphia: P. Blakiston, Son & Co. 1893. 8vo. Pp. 1112. Half Russia. \$6. (For sale by West, Johnston & Co., Richmond.)

This familiar work in new dress is "a compendium of recent formulæ and therapeutic directions from the practice of eminent contemporary physicians, American and foreign." As will be remembered, Vol. I treated of General Medicine and Diseases of Children. So that that volume, with the one now under notice, covers in the main the whole field of practice as undertaken by the general practitioner. While no attempt is made to cover the field of operative surgery, there are given so many valuable suggestions of general and specific therapeutic importance connected with surgical cases, selected from the practice of surgeons of renown, that the work will prove of great profit even to specialists. As now presented by the publishers, the work is ornamental in the library, as it is useful for frequent consultation.

International Clinics—Quarterly of Clinical Lectures, etc. By *Professors and Lecturers in the Leading Medical Colleges of the United States, Great Britain, and Canada.* Edited by JOHN M. KEATING, M. D., LL.D., Colorado Springs, Col.; JUDSON DALAND, M. D., Philadelphia; J. MITCHELL BRUCE, M. D., F. R. C. P., London, Eng.; DAVID W. FINLAY, M. D., F. R. C. P., Aberdeen, Scotland. VOL. I. THIRD SERIES. 1893. Philadelphia: J. B. Lippincott Co. Cloth. 8vo. Pp. 361.

This issue of the "Quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynæcology, Ophthalmology, Laryngology, Otolology, and Dermatology" contains fifty lectures by as many able teachers in the various departments named. In every respect the volume is serviceable to the practitioner—whether general or special. The work is obtainable only by subscription, which should be addressed directly to the publishers.

Modern Gynæcology—A Treatise on Diseases of Women, Comprising the Results of the Latest Investigations and Treatment in this Branch of Medical Science. By CHARLES H. BUSHONG, M. D., Assistant Gynæcologist to the Demilt Dispensary, New York, etc. *Illustrated.* New York: E. B. Treat. 1893. Demi, 8vo. Pp. 380. Cloth. \$2.75.

For the general practitioner or family physician, who is not attempting the surgery of diseases of women, this is a most valuable book of every day use. It treats of the larger class of female diseases for which he is being consulted, and to which class of diseases, strange to say, the usually accepted text-books on gynæcology rarely pay attention. While it is not the book for the laparotomist, etc., it yet teaches the physician how to diagnose cases that should be handed over to the surgeon, etc. Those practitioners of large experience, who have long adopted the general line of suggestions contained in this book, can only wonder how it is that some doctors in the general run of cases have such an enormous amount of justifiable surgical gynæcological work as they claim. We most cordially commend Dr. Bushong's book for adoption as the guide book of the general practitioner.

Editorial.

Medical Society of Virginia.

The *Preliminary Announcement* of the Twenty-fourth Annual Session, to be held in Charlottesville, Va., October 3d, 1893, will be issued about August 1st, and in the meantime it is hoped that earnest work will be done by every Fellow to secure the full list of his professional friends, not already members, as applicants for membership. It is a duty every worthy doctor owes to his patrons, as well as to his profession, to become a member of his State Medical Society, so as to help make its rules and regulations adapted to the interests of his section. Besides, the day has come when many regard it as a reflection upon the professional standing of a doctor not to find his name in the list of the members of the profession who are recognized as the ablest of physicians and surgeons in his State.

The College of Physicians and Surgeons, Richmond, Va.,

Seems to be an assured success. Interested inquiries from far and near have been coming in to different members of the Faculties in such numbers as to indicate that there is a real demand for the establishment of a three years' graded course in this section. Each step in the organization of the College has been carefully taken, so that it is just now, for the first time, that the Secretary could have answered the questions asked. We call attention to the Announcement on pages 54 and 55 in the Advertising Department of this issue. The Professor of Anatomy will be announced in our August number, and probably some additional names will appear in the Adjunct Faculty. The selection of the former Pinel Grounds, on West Broad street, for the location of both the College of Physicians and Surgeons and the Richmond City Hospital, we look upon as an excellent one, as it is in that direction that this fast growing city is most rapidly developing. While text-book drilling and didactic lectures will be thoroughly given, it is a special purpose of this College to instruct by clinics, laboratory work, etc., so as to turn out graduates not only so far as the careful reading of books is concerned, but as well prepared practitioners. With the several developing dispensaries, etc., in this city, mostly under the direction of members of the Faculties of the

College, and with the arrangements being pushed for the early opening of the Richmond City Hospital, there will be an abundance of available clinical material for instruction purposes as soon as the session opens next October.

The National Association of Railway Surgeons

Held its Sixth Annual Session in Omaha, Neb., May 31st, June 1st and 2d. Under the Presidency of Dr. Chas. W. P. Brock, of Richmond, Va., the Association made a wonderful development in increasing its membership and influences for professional as well as for railroad interests. No Association has presented papers of more decided value, and the discussions were all of a high order. Dr. Brock's address as President was ably prepared, well delivered, and left a most decided impression for good on his large assemblage of hearers—about 1,500 doctors being in attendance. Dr. W. J. Galbraith, of Omaha, was elected President for the ensuing term, and the continuous evidences of his ability and influences, and the high position he has won for himself in the profession, together with his great personal popularity in every circle of railroad men and able doctors, assure us that, under his administration, every interest of the Association, of the hospital departments of railroads, and of the profession will be carefully guarded and made to prosper. The next Session will be held late in April, 1894, in Galveston, Texas. Dr. R. Harvey Reed, of Mansfield, Ohio, has done so much to build up this Association, that his name should ever be mentioned in connection with its progress. The *Railway Age*, of Chicago, has been adopted as the organ of the Association. This journal has a department devoted solely to the surgical interests of railways. We regret our space does not allow of a report of the session, but from time to time we will have occasion to make synopses of some of the excellent medical papers presented during the session.

Vacancies in Faculty of Medical College of Virginia.

The Board of Visitors will meet July 12th to elect a Professor of Diseases of Women and Children—Prof. J. S. Wellford, resigned. It is understood that Prof. J. N. Upshur has resigned the Chair of Materia Medica and Therapeutics, and hence his successor will have to be chosen. A Professor of Diseases of the Eye, Ear and Throat, and a Professor of Pathology and Bacteriology will also have to be elected to fill these respective new Chairs.

Dr. J. S. Wellford.

Just as we are going to press, we learn of the resignation of this senior member of the Faculty of the Medical College of Virginia, in which he has been a professor for about twenty-five years. He succeeded his father, who was one of the charter members of the College. Dr. Wellford has been so intimately connected with all the interests of the College, and is so familiar with its history, and has himself served so faithfully and well in the chairs he has filled, that his resignation at this time will be felt as a serious loss.

The Virginia State Board of Health,

As recently reorganized by appointments of the Governor, has projected a plenty of work to occupy its full time for the public health. But the people are very much mistaken if they suppose that the seven members composing the Board propose to sacrifice their time and labors, and at the same time assume pecuniary responsibilities, which they have no surety would be repaid. If communities can run the risks involved, then surely the doctors of the State can. Boards of Health are serviceable to the people especially; it is only humanity that calls on the doctors to dictate and direct preventive measures against epidemic and preventable diseases, etc.

Corrections in Dr. Kober's Article on Cholera.

In presenting the illustrations in the most excellent article by Dr. Geo. M. Kober, of California, in our May number, we regret to find that we inadvertently failed to make full acknowledgment to Prof. Dunham for the electros used in illustration, and omitted explanatory text on pages 136, 137 and 138. Moreover, Fig. 4 should read Fig. 1, and Fig. 1 should be Fig. 4.

Southern Medical College.

We are advised by the Dean, Dr. W. P. Nicolson, of Atlanta, Ga., that this Institution, which has taken such a prominent stand in the education of Southern doctors, will begin its session next fall with a three years' graded course. Under his leadership, it may be expected that the Southern Medical College will always be ready to take such advanced steps as the surroundings may justify.

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Original Communications.

ARE. I.—Puerperal Septicæmia.*

By M. C. BALDRIDGE, M. D., of Huntsville, Ala.,

EX-PRESIDENT MEDICAL ASSOCIATION OF STATE OF ALABAMA, ETC

Four years ago, Dr. John F. Stewart, a member of this Association, presented an able and exhaustive paper on septicæmia in relation to an early diagnosis. The paper was well received, but was not thoroughly discussed. Now the subject is receiving at home and abroad more attention at the hands of the profession than at any previous time, due largely to the fact that bacteriological investigators and antiseptic reformers are making scientific observations and formulating theories touching the etiology, prevention, and treatment of septic troubles peculiar to the puerperium. The theories are so diverse and unsatisfactory that the average obstetrician is forced to extricate himself from the confusion and conflicting opinions by examining the subject in the light of experience and plain facts, as they are presented to us in our every-day observation.

* Read before Medical Association of State of Alabama, April, 1893.

In the beginning of this paper, suffer me to disclaim any intention of obtruding opinions which are strictly at variance with the advanced ideas and teachings of the day—we would not if we could; but it is our privilege to express conscientious views, which have been adopted after mature deliberation and no little observation, and we now desire simply to provoke discussion among the members of the Association upon this very important subject.

With this apologetic introduction, we propose to treat the subject in a practical way by dividing puerperal septicæmia into two varieties, and in support of this division will quote as authority Drs. Sternburg and Meronoff.

Sternburg says, "There are two forms of septicæmia. The first is an infective disease," which he terms "'septic intoxication,' due to the rapid multiplication in the body of infective animal or parasitic poison. The other is a septic toxæmia due to the effects of chemical poison or poison evolved during the putrefactive decomposition of certain organic substances, especially of nitrogenous animal productions."

Meronoff says, "Puerperal affections may be divided into two classes, one of which embraces specific cases, which are caused by the penetration into the genital tract of certain pathogenic bacteria, and the other class is caused by the absorption into the circulation of ptomaines by certain putrefactive and non-specific bacteria."

The *first* variety, which is by far the most frequent, appears to be developed in individuals who are the subjects of traumatism; hence we will, for convenience, denominate that the traumatic, and include under that common head all septic troubles peculiar to the puerperium, which ensue after lesions in the genital tract, thus giving rise to a pathogenic infection, which, by some, is called wound infection, and will here include vulvitis, peritonitis, metritis, cellulitis, lymphangitis, etc., with their peculiar local characteristics and general systemic phenomena. It is claimed by nearly all modern obstetricians that the etiology of puerperal septicæmia is clearly traceable to the presence of certain micro-organisms, known to the bacteriologist as streptococci, chain-

like bacteria; and staphylococci, or round bacteria, which come in contact from without with the wounds or abrasions at the time of, or immediately following, the injury. These are taken up by the circulation, multiplying in the tissues, and are held accountable for the septic trouble, whether slight or grave. This theory of the origin of puerperal sepsis is doubtless true to a certain extent, but does not satisfactorily account for every case which occurs in domestic practice, nor can we see how a certain proportion of lying-in women, who, under the most favorable hygienic surroundings, become the subjects of septic infection, while so large a proportion, less favorably situated, experience perineal ruptures, cervical lacerations, pudendal abrasions, etc., together with every conceivable mismanagement at the hands of ignorant and meddlesome midwives, without any appreciable sign or symptom of septicæmia.

With an obstetrical experience of several years among the negroes during the days of slavery, and carefully noting the results of about one hundred puerperal negroes, septicæmia did not occur in but two cases; and in those septic pyæmia ensued after prolonged labor and instrumental deliveries, which were attended by extensive local injuries in the genital tract, with purulent formation and infiltration. Some of the cases thus noted were delivered by competent physicians, but most of them were attended by ignorant midwives—not a few presented perineal rents. Some of them experienced protracted labor, and all of them were fit subjects for bacterial infection. This observation was not confined to the colored race alone, but among white women in the rural districts, and the poorer classes in the towns and cities.

From this it would seem that while the presence of bacteria is the rule during the puerperium, septic infection is the exception. And it must be admitted that much doubt exists in the minds of modern bacteriologists touching the etiology of septicæmia, since the same micro-organisms which are found in septicæmia are also present in many other morbid conditions, and in the healthy body as well;

and, after all, there must be other factors which enter into the causation of puerperal septicæmia in addition to the presence of pathogenic micro-organisms. It is not improbable that among the better classes a state of morbidity, due to hæmorrhage, shock, exhaustion, enervation, and retrograde metamorphosis, render the parturient especially liable to the pernicious action of the pathogenic agencies, which alone, under other circumstances, would have no appreciable effect. But for this solution of the case, we would expect every parturient woman, who sustains a rent, or has not been the subject of aseptic and strictly antiseptic treatment, to become the subjects of infection.

Again, we not infrequently see cases in which the septic trouble presents a pyogenic aspect, in that the tendency to purulent infection and metastatic abscess is present early in the beginning; and in this variety the micro-organisms differ from the streptococci of the preceding, in their appearance at least, for they are round or rod-shaped, and, because of their peculiar formation, obstruct the capillaries when they come in contact with the red corpuscles, causing them to become agglutinated; and in this way thrombi are formed, which serve as foci for the deposit of other micrococci, and these in turn multiply in the surrounding tissues. However this variety of septicæmia, differing apparently from the first named in some of its etiological aspects, may be regarded as a sub-variety, nearly allied to the former in the matter of prophylactics and treatment, and when studied together, they clearly belong to the first form of septicæmia.

Under the *second* head, we classify all cases which occur independent of lesions in the genital tract, but owe their origin to causes within the body, rather than from without, and may not be improperly called auto-infection, which Kaltenbach defines as a "process in which the micro-organisms which are present in the genital secretions before labor develop virulence after labor." This occurs when pieces of placenta or shreds of secundines are left in the cavity of the womb after parturition, which decompose, producing a

chemical poison or septic toxæmia; and this, we believe, is *true puerperal septicæmia*, differing in its causation, symptomatology, and treatment from the traumatic or infectious. In this variety, we have a poisoned condition of the blood, which is the product of the putrefaction of animal substances, such as portions of the placenta, clots of blood, or small pieces of retained secundines. These substances, in a state of decomposition, generate sepsis, or a poison which readily permeates every tissue, devitalizing the blood, and reducing the unfortunate sufferer to a condition of extreme adynamia and exhaustion of all the vital forces.

The micro-organisms which are here found belong, for the most part, to the round or rod-shaped bacteria; and, notwithstanding the presence of *staphylococcus pyogens*, abscesses do not often occur.

After all, with our present knowledge of bacteriology, we may not attach too much importance to the presence or character of micro-organisms which may not exist as pathogenic factors in the causation of puerperal septicæmia until a special germ is found, which invariably, under similar circumstances, produces the same results.

To illustrate, permit me to briefly report two cases of true septicæmia, which occurred under my observation within the last two years, at a time when my attention was being specially directed to the subject of asepsis and antisepsis in relation to the puerperal state:

CASE I.—A primipara, aged about twenty-four years, of delicate mould and nervous temperament, who had experienced good health previous to confinement, was, at the close of term, found to be in labor. Her room was clean, airy, all carpets and woollen fabrics had been removed, her body had been thoroughly cleansed, and her condition was altogether such as to warrant a safe and satisfactory puerperium. But labor began to linger, pains were ineffectual, instrumental interference was opposed by the patient until eighteen hours had elapsed. During the time vaginal investigations were seldom made, and then only after thorough cleansing and disinfection. The forceps were then cleansed in hot carbolized water, carefully introduced, and the woman was delivered of a living babe without any ap-

preciable injury. In due time, the placenta was removed after Crede's method, the vagina thoroughly cleansed with hot water, and all was doing well. But, on the third day, slight chilliness occurred, which was followed by high fever, thermometer registering 104° F. Intra-uterine irrigation, consisting of one quart or more of carbolyzed water, 1 to 200, was done, the os having been exposed with a speculum. At the close of irrigation, a small piece of membrane appeared in the mouth of the womb; this was removed, and was quite offensive. Two hours after the douche, the temperature had receded to 101° F., and continued, with morning remissions and evening exacerbations, until the seventh day, when it suddenly re-acted to 105° F., with all the indications of a grave attack of septicæmia. Suspecting the cause to be hidden, and within the uterus, an intra-uterine injection of hot water and mercury bichloride, 1 to 5000, was used, when another piece of membrane was expelled in a highly decomposed condition. The cavity was then cautiously curetted, and the woman recovered under constitutional medication.

CASE II was similar to the first in age, temperament, and habits of life, but had been the subject of menstrual irregularity from puberty. At full term, and after the faithful observance of every precaution, according to the advice of her family physician, after about fourteen hours' labor, with the evidences of a concealed hæmorrhage and extreme exhaustion, the forceps were used and the delivery was accomplished under the most thorough antiseptic precautions, according to the teachings of the day. A living child was born without visible injury, except a slight abrasion at the inferior fourchette. There was an adherent placenta, which was carefully and thoroughly removed by the hand in utero, which had been rendered aseptic before introduction, and every particle of the mass was detached and removed. Antiseptic douches were used, but on the fourth day septicæmia ensued, and on the fourteenth day the patient died. This patient was exhausted by prolonged labor, concealed and post-partum hæmorrhage.

The above cases have been selected from a number of similar cases, which clearly indicate the fact that causes other than the presence of bacteria sustain a causative relation at least to true puerperal septicæmia.

Symptomatology.—For the purposes of this paper, it is not necessary to dwell on the entire range of symptoms which

present in the various phases of septic poison, but will refer to the more pronounced which *differentiate the infections, or pyæmic variety, from the true.*

The former is ushered in with a chill, which usually occurs from the second to the fourth day after delivery. It is of variable intensity, and is peculiar in this, that the thermometric curve is irregular throughout the entire course of the disease. Seldom pronounced intermissions, but usual evening exacerbations, with recurring rigors or chills, profuse perspirations, attended with an acid odor, are present, and diarrhœa not infrequently occurs. Abscesses, metastatic in character, frequently appear; pulse, usually variable in the beginning, becomes small and rapid as the disease advances, and toward the close, in fatal cases, is irregular and dicrotic. Thirst is a prominent symptom; tongue smooth and red. Urine scanty, and often albuminous, with delirium, sometimes wild, but often low and muttering.

In true septicæmia, the fever makes its appearance on or about the third day, and is not, in all cases, ushered in with a chill. The temperature for the first day following the chill is high, often rising to 104° or 105° , and maintains a high grade daily, with slight remissions every morning. Profuse perspirations do not occur, but the skin is uniformly moist. Pulse quick and small, and, under slight pressure, is easily obliterated. Stomach irritable, with frequent vomiting. Thirst insatiable. Bowels loose, sometimes obstinate diarrhœa, with an offensive odor.

The differentiation between the two forms of the disease consists of recurring chills, variable temperature and metastatic abscesses in the former; while, in the latter, chills do not occur, temperature is uniformly higher from the beginning, and abscesses do not often occur.

Prevention.—It is in the prevention of septicæmia that the physician will be able to display the greatest amount of skill and render the most valuable service, and, to this end, there are two all-important facts to bear in mind:

First, the probable relation which exists between the pu-

erperal condition and the presence of pathogenic micro-organisms.

Secondly, the effects of hæmorrhage, shock, exhaustion, etc., all of which, as before stated, constitute potent factors in the causation of septic troubles.

In order to meet the first indication, the conditions and surroundings of the woman previous to confinement should be regulated favorably to the parturient condition. The all-wise law of cleanliness should be rigidly enforced, without entering into all the details of modern asepsis and antiseptics, not a few of which are impracticable in domestic practice, while some are meddlesome, if not absolutely harmful. Since bacteria can only be productive of harm in a majority of cases through traumatism, due care should be observed in the prevention of local injuries; and when they do occur, prompt attention should be given, rents should be closed, dressed antiseptically, and left to heal with as little handling as possible, remembering at all times that cleanliness, rest, non-meddling, and the reserve forces of nature will accomplish all that may be necessary; while the frequent use of medicinal irrigations, as often prepared with drugs and chemicals that are productive of more injury to the patient than the bacteria when present, will result in disappointment to the practitioner, and prove detrimental to the patient. It is the habit of some, previous to confinement, to practice frequent ablutions of the body, with the daily use of vaginal douches impregnated with hydrarg. bichloridi, carbolic acid, and often other medicinal agents. Enough clean water to thoroughly cleanse the body is necessary, but an elaborate crusade against bacteria is, in our opinion, altogether wrong; for if pathogenic agencies be present at the time, which is not invariably the case, repetition of local treatment at the hands of unskilled nurses and incompetent midwives, with instruments of questionable cleanliness, may induce the very condition of things which it is desired to prevent. We may place too much confidence in the use and efficacy of antiseptics, and not enough in rest and non-interference previous to and

following parturition. During gestation, regular habits should be practiced, out-door exercise, a proper attention to diet, free evacuations from the bowels, and, above all, the early recognition of, and the prompt attention to, the first appearance of albuminuria.

Again, the process of child-bearing is one in which the nervous and muscular systems are subjected to inordinate excitation and extreme tension, even under the most favorable circumstances; and should labor be prolonged until the strength is exhausted, hæmorrhage occurs, or inertia of the womb ensues, then the condition is one in which true septicæmia is likely to occur.

According to our observations, the conditions just enumerated occur more frequently in subjects of delicate physical organization, whose habits of life have not tended to a perfect physical development, and who have inherited a highly sensitive or unusual impressibility of the nervous system. And we do not believe that this class of patients are more obnoxious to the deleterious action of bacteria than others whose surroundings and sanitary conditions are less favorable.

Since exhaustion from prolonged labor is an important factor in the causation of these troubles, nature should be assisted by quieting, to some extent at least, undue nervous excitement, until the os is sufficiently dilated. Then, in due time, apply a clean pair of forceps and deliver. No woman in labor should be allowed to suffer ineffectual pains until a healthy physiological condition becomes pathological. After the use of the forceps, should a perineal rent be the result, which does not necessarily follow the skillful use of the forceps, the rent should be closed antiseptically, and if the placenta should be adherent, it should be removed with a thoroughly sterilized hand, and the womb washed out with hot water, to which may be added carbolic acid, 1 to 300, or hydrargi bichloridi, 1 to 5000. Hæmorrhage, if pre-partum, is best relieved by instrumental delivery; and if post-partum, should be arrested by irrigations of hot water. The uterus having been thoroughly

cleansed of everything that is liable to decomposition, or promotive of septic intoxication, then apply iodoform gauze to the vulva, a comfortable-fitting binder to the pelvis and abdomen. If, however, on the third or fourth day after delivery, a sudden rise of temperature, with or without a chill, should occur, we may expect trouble, and the uterine cavity should again be irrigated with an antiseptic preparation; and if the placenta had been forcibly removed because of attachment, then it would be advisable to use the curette. This instrument, however, should not be used except for the removal of putrefactive substances, which are within the uterine cavity. Irrigations with water of a high temperature, with or without antiseptics, are admirable. They reduce temperature and wash out ptomaines if present; but in normal labor, occurring in healthy women, with favorable surroundings, all such precautionary methods are unnecessary, and often productive of great harm. This opinion is clearly enunciated by Axman, who states "that after an experience of thirty years as director of a lying-in institution, he has arrived at the conclusion that cleanliness, rest, and non-meddling, are the right disinfectants." And he deprecates the use of all chemicals in healthy pregnant and lying-in women. Other foreign authorities, together with quite a number of obstetricians in this country, are now expressing the same opinion; thereby supporting the idea that practical observation and bedside experience not infrequently fail to confirm the teachings of scientific research and plausible theories. In all normal labors, the best preventive methods consist in rest of mind and body, clean linens and bedding, and an occasional vaginal injection, with hot water only, when the discharges are not specially offensive. When otherwise, disinfectants may be added.

Treatment.—So much having been said under the head of prevention, we propose to mention only some medicinal agents which would appear to be indicated. And as the disease is one of sepsis, whether infective or toxæmic, antiseptics are indicated according to the peculiar form of the

disease under treatment—in the former, mercurials, quinine, and febrifuges, such as have a tendency to act on the kidneys. These may be followed by some of the modern and more direct antiseptics, such as salicylate of soda, in doses from 15 to 20 grs. every three hours, administered in some bitter infusion. Salol, in doses of from 7 to 10 grs. every two or three hours for one or two days, may be continued three or four times daily. Eucalyptus and resorcine each have their advocates, and may be used with benefit. Minute doses of mercury bichlorid, repeated three or four times a day, is often quite efficacious, especially when diarrhœa is present. Opium and its preparations are to be used for the relief of pain only; so antikamnia or sulphonal may be given as an analgesic and soporific. Should abscesses occur, they should be evacuated early and cleansed with antiseptic washes, one of the best of which is peroxide of hydrogen, and then treated with iodoform gauze. Antipyrine and antifebrine may be used to reduce high temperature in the beginning, but should not be relied on because of the tendency to heart failure and the depressing effects of the drug upon all organic functions. An emulsion of turpentine, when tolerated by the stomach, is not only indicated as a stimulating antiseptic, but, according to my observation, is an excellent remedy.

In the true, or toxæmic form of septicæmia, but little benefit is derived from the use of most of the above named remedies, and we should endeavor, at the very onset of the disease, to prevent the destructive changes which speedily set up in the blood and support the strength and vital forces of the patient. To this end, alcohol is, *par excellence*, the remedy. This may be given in any form most acceptable to the patient—either of the dry wines, whiskey or brandy, but in whatever form it is preferred, large doses will be required. It must be taken to toleration, *per orem*; when the stomach will no longer receive it, then administer *per rectum* or hypodermically. The quantity is not to be considered, but rather the effects, and its use should be continued, *ad libitum*, until fever subsides and convalescence is

established. Digitalis or strophanthus is indicated to support the heart, while the chlorinated tincture of iron is perhaps the best corroborant and oxygenizer of the blood. The diet should be supporting throughout, consisting principally of milk, eggs, and beef peptones.

ART. II.—Laparotomy in Puerperal Sepsis.*

By J. WESLEY BOVEE M. D., of Washington, D. C.,

GYNÆCOLOGIST TO COLUMBIA HOSPITAL; PROFESSOR OF GYNÆCOLOGY, NATIONAL UNIVERSITY, ETC.

The prevention of puerperal sepsis is probably the most important matter to be considered in the care of the lying-in woman. The vigorous work in this direction that has already been done has caused the death-rate from sepsis in maternities to fall from about twelve per cent. to less than one-half per cent. Not that more than one-half per cent. of the cases treated are not infected, but that they are treated early by vaginal and intra-uterine irrigation, and perhaps curetting added, thereby removing septic decomposing material and securing relief from the dangerous product.

I do not care to touch upon the subject of methods of infection in this short paper, and will deal only with the classes of cases where the septic condition has penetrated the broad ligament, ovary, or both, and perhaps invaded some other portion of the body.

As I previously mentioned, preventive treatment is of the utmost importance, for it is by such treatment that we prevent the entrance of sepsis. We stitch up the lacerated perineum and vagina; and if we note large tears in the cervix uteri, they, too, are cleansed and closed. I do not believe it to be advisable, ordinarily, to close the small cervical rents that occur in nearly every woman during de-

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, held May 8th, 1893.

livery, because of the disturbance to the patient incident thereto just at a time when rest is so very essential. If we could well do that, however, I think we would have less sepsis, as I believe the danger from infection through the site of cervical tears is nearly, if not quite, as great as from the cavity of the uterus. However this may be, the subject-matter of this paper is not changed.

The time was when sepsis was constantly present in the maternity, and the severer cases usually died. The treatment by opium caused a paralysis, both motor and sensory, of the bowels, and an accompanying distension of them. Such paralysis and distension is incident to puerperal, purulent peritonitis. The cases so bad as that died—again proving the fallacy of the homœopathic edict—*similia, similibus curantur*. Following this, the application of cleanliness was practiced, and now these patients are aseptically treated, with good prospects of preventing heterogenetic infection.

In short, since the conclusions of Semmelweiss were published in 1847, we have learned to treat the puerperal patient as a surgical patient. The traumatic injuries of the perineum, vagina, etc., and the normally raw surface of the placental site are treated exactly as are surgical wounds. The result of such radical changes in the treatment of the lying-in patient is the exceeding infrequency of sepsis in maternities. Now the puerperal woman is far safer in the maternity hospital than in her own elegant apartments.

Notwithstanding their utilization for the clinical instruction of medical students whose time is occupied in the pathological laboratory, the dissecting room, and in the practical study of nearly all kinds of diseases, the maternities afford far better statistics as to puerperal sepsis than does private obstetrical practice. This seems all the more wonderful after considering the habits, surroundings, depravity and degradation of the patients usually admitted to the lying-in charity; for oftentimes women are admitted in labor with the genitals well-spotted with venereal sores, or with a severe case of gonorrhœa. She is carried through her ac-

couchement usually as satisfactorily as is the sound and healthy woman. Therein is proven the efficacy of the careful methods in vogue in this stage of obstetrical knowledge. The statistics of Dr. Joseph Price challenge the world; yet he dissected night after night in the loft over his brother's stable while conducting his obstetrical work. He said he never saw any trouble come from it. I would not have you think that sepsis never occurs in such institutions, but that it occurs very seldom. Most septic cases following labor or abortion that are seen by us are private cases, and, in my own experience, seen in consultation. About three weeks since, I saw in consultation a woman dying of general, puerperal, purulent peritonitis. I have seen three others during the past year in consultation that were in frightful septic conditions following labor.

I believe nearly all cases admitted to Columbia Hospital suffering with pus collections incident to labor or abortion, were delivered outside of maternities. Of course many of these cases are attended by no physician, as many women are satisfied with the services of a midwife, or perhaps with no person whatever.

Thus far I have diverted from my subject, which is not the prevention of sepsis, but its treatment after spreading.

If we fail to prevent a septic condition of the lying-in woman, either in hospital or private practice, what can we yet do to relieve the condition? This is a question I cannot, in this short paper, fully answer. The condition may be such that vaginal or intra-uterine irrigation may entirely relieve it. Perchance the use of the finger or of the curette may be necessary and sufficient. But in these cases the disease (if I may be allowed the use of the word here) has not gone outside the parturient canal—has not been carried by the veins and lymphatics to the broad ligaments, to the peritoneal surfaces, or, by the thoracic duct, into the general circulation for distribution to lungs, liver, heart, spleen, and other organs. There are a number of varieties of puerperal sepsis, differing very materially in their pathological conditions and clinical histories, and accompanied, some

of them, by a destruction of life fearful to realize. These are principally putrid infection, purulent infection, puerperal septicæmia, and a form whose striking characteristic is sudden death. Puerperal mania, often a hopeless condition, compared to which death would be a blessing, is, by some obstetricians, considered a result of a septic condition.

Thus far we have made no progress of value in the treatment of purulent infection and puerperal septicæmia. The condition in the cases of sudden death during the lying-in period—usually septic emboli blocking up the circulation of blood to some vital part—cannot be usually forestalled, inasmuch as patients are feeling well and are suddenly stricken, dying in a few hours, with no chance for relief.

In many, and perhaps a majority of cases of septic infection, there is first a lymphangitis or a phlebitis, or both, in the uterus, which extends to one or both broad ligaments—to the ovaries, one or both, to the peritoneum, and thence to other organs.

In one class of these cases, the septic process is limited to the broad ligament, with, perhaps, an additional collection of pus in the ovary, and usually a septic uterus, which is the site of a putrid infection. This septic process may spread to the pelvic portion, or even to the abdominal part of the peritoneum, thus making another class of cases to which I will later refer.

Both of these classes may be, I believe, assisted surgically, and be, by this means, perhaps cured.

Now, this peritonitis is often a connecting link between the milder varieties of infection and the most fatal forms of it. Whenever it appears, we must necessarily have the gravest fears of a fatal termination. Assistance, if rendered at all, must be rendered now, as probably this is the last opportunity. A day's delay at this time, and the chance—if it be a chance—has been neglected. I, myself, operated on a case with a fatal result that will perhaps satisfactorily illustrate this point:

L. F., white, aged 25 years; single; multipara; was admitted to Columbia Hospital in labor January 22nd, 1892;

labor normal, perineum slightly lacerated and closed by chromicized catgut.

On the sixth day, the temperature suddenly arose to 105° Fah., and did not fall below 103° Fah. for the next few days. The third day of the fever, the lochial discharge being offensive, the uterus was swabbed out with a one to four solution of hydrogen peroxide after irrigation. All odor disappeared, and the flow shortly afterward ceased. The uterus was large and tender, and to the right side, as well as to the left of it, large fluctuating masses, thought to be pus collections.

Her pulse ranged from 100 to 120, and believing her condition to be grave, I urged a laparotomy, which had been advised by my colleague, Dr. Stone. She gradually grew worse, but refused operation until the trouble had lasted fifteen days, when she consented, and next morning the abdomen was opened. She was reduced almost to a skeleton, and her temperature was 105.2° Fah. The uterus was found to be fully as large as two weeks before. Two pus sacs were removed, one of which was attached to the cæcum and upper part of colon, forming an abscess there. There were various pockets of pus in the abdomen, and the lymphatics in the broad ligaments were veritable pus channels. The Fallopian tubes were apparently normal, but the ovaries were the pus sacs. Pus came through the drainage tube, and death entered it in sixty-three hours.

Fifteen hours after death revealed intense peritonitis; loose pus in pelvic cavity; the intestinal wall, uterus and kidneys riddled with pus; liver fatty; spleen enlarged and semi-fluid; heart fatty, and chambers expanded and thin-walled.

Another class of infected cases that are quite amenable to surgical treatment are those having inflammatory affections localized in the appendages. A woman sustains some injury during labor to these parts, or has had an old öophoritis, peri-öophoritis, salpingitis, or pelvic peritonitis. There happens to be a slight amount of septic material in the uterus that comes in contact with this irritated lining of the Fallopian tube. The result is a virulent septic inflammation and a collection of pus in the tube, ovary, or both, or surrounding structures. This may, if allowed to remain long enough, burrow through into some neighboring hol-

low viscus and discharge. A spontaneous cure may result. More often, however, the patient dies from exhaustion, or is the victim of a life of suffering.

And still another class is where a necrotic process is progressing in the uterus, with few, if any, symptoms, and finally bores through the wall of that organ at some place, and appears on the outer side as an abscess, that continues to travel until it empties in some organ, or on some periphery of the body. I have seen these openings on the latter and posterior sides of the uterus, as well as at the tubouterine junction, and have seen them extend as high as the spleen. This, I think, is the least dangerous of these extra-uterine septic conditions following labor. I mean they yield the most satisfactory results—varying but little from cases of pyosalpinx.

In many of these cases of purulent collections, the peritoneal cavity does not have to be opened. They may occasionally be reached without disturbing the peritoneum, being extra-peritoneal. To that extent, the title of this paper is incorrect. Such operations would not be laparotomies.

This gives us four classes of cases of puerperal septic infection outside the uterus, that may be combatted with fair success, by opening the abdomen and at least irrigating. In all these cases, we should not neglect to thoroughly cleanse the uterine cavity by irrigation and the application of the curette, if the uterus be not disintegrated. In these four classes of cases, the plan is to evacuate any accumulation of pus that is possible, and even the sac, if found to be advisable; thorough irrigation, at all events; and if pus sacs cannot be removed, then thorough drainage, with perhaps occasional irrigations.

The success following laparotomies in treating general septic peritonitis is far from flattering. But what of all other kinds of treatment? Can they show any advantage? By no means. Nearly every case is fatal. A recovery is nearly miraculous. Surgery offers the only chance to these patients.

The success of surgical treatment of the four classes of

cases mentioned is in the following order: fourth, third, first, and second. The fourth and third varieties are quite easily handled usually, but the first is more difficult, requires more care during the operation, and in the future drainage and other matters in the after-treatment. The second class does not yield so well to surgical treatment, though it offers more than aught else to a woman who is rapidly approaching her end.

Now, what are the indications for surgical aid in puerperal sepsis as existing outside the uterus in the pelvis or abdomen, what the procedure, and when the proper time? Of course there will be some disturbance of the economy—usually a chill that is of long duration; there may or may not be considerable fever, rapid pulse, pain in region of uterus, or, later, in the lateral regions; the lochiæ may or may not be offensive—ofttimes not so—and may be entirely absent.

We have the evidence of sepsis, the details of which should be familiar to every member present, and I will not therefore enter into the details of its symptomatology.

Exploration of the uterus does not satisfy us, but we irrigate with a very slight or no improvement. We carefully examine bimanually, and find whip-cords, tender to the touch, extending from the uterus into the broad ligament, or perhaps a doughy swelling of one or both broad ligaments. These are the lymphatics, and perhaps the veins inflamed. There may be a larger, soft, fluctuating mass, which is a collection of pus in the broad ligament. If it extend a little higher and more movable, we will, at least, suspect that it is a collection of pus in the ovary. We may not recognize the Fallopian tube, it being normal. This would be evidence of infection, not through the tubes, but through the lymphatics and veins. We may find a boggy, fluctuating mass surrounding or crowding up to one side of the uterus. A recto-abdominal examination will ordinarily reveal its location—whether extra-peritoneal or intra-peritoneal. The abdomen may show that the general

peritoneum is affected. These cases are all more or less rapid in their progress.

The boring process through the uterus is quite slow, and as soon as it is nearly through, we can detect it by vagino-abdominal examination. The septic salpingitis of the puerperium may also occur slowly. These two classes of cases do not demand *immediate* interference usually, although there may be symptoms so urgent as to render haste positively necessary. The first two classes cannot be postponed. As soon as the symptoms and physical examination show the condition fairly probable, we must not delay. The patient, if mentally clear (if not, then the proper friends), must be apprised of her grave condition and of the positive necessity for surgical relief. The operation should be done early to give the woman the only chance for recovery. Delay allows the disease process to spread to the circulation, when we will be comparatively powerless. Even if the peritoneum be the part affected, an irrigation may relieve the sufferer. If the seat of trouble be outside the peritoneum, then we can open, drain and irrigate without entering the peritoneal cavity.

Nearly always these operations are done too late. We read nearly every day of some case being opened, but death followed shortly, due to the advanced condition. The surgeon realizes that delay had rendered surgery useless. So is it in many capital operations previous to the general adoption of them. By early interference, I believe many of the cases now considered hopeless will be cured.

Pelvic surgery is rapidly advancing. Surgeons are more skilful, rapid, and discerning. We are realizing the necessity for prompt action in many conditions. If I mistake not, the greatly lessened mortality rate of the child-bearing woman from sepsis will still be lowered.

916 Fifteenth Street N. W.

ART. III.—Physical and Psychical Disturbances Induced by Eye-Strain.*

By PETER A. CALLAN, M. D., of New York, N. Y.,

SURGEON NEW YORK EYE AND EAR INFIRMARY.

The physician engaged in his daily work of combatting disease usually devotes his time and attention in proportion to the gravity of the malady, and he is able to overlook or ignore the complaints of the chronic invalid. These complaints or ailments do not directly endanger life, but, at the same time, the general well being and happiness of the patient are greatly influenced by them. It is in regard to some of these complaints that I wish to call your attention this evening.

We are all familiar with certain forms of reflex action; some are common property, so well known have they become; and, on the other hand, there are others quite obscure.

Reflex action can be best defined as an excitant or stimulus to a centripetal nerve conveyed to a nerve-centre, and thence converted into centrifugal action. A highly organized organ like the eye, which is continuously receiving impressions during the waking hours, very frequently causes reflex action, especially if the refraction and muscular action are faulty.

If you will pardon me, I will recall to your memory that there are three refractive conditions of the human eye, viz: the emmetropic or normal eye, the myopic near-sighted, and the hyperopic or over-sighted, miscalled far-sighted.

These two latter can have more or less difference in their corneal and lens radii, which constitutes astigmatism. The emmetropic is a standard or schematic eye, and only occurs as an accident; in other words, all eyes have some error, but it was thought expedient to adopt, *as a normal eye*, a certain small amount of error. Donders, in his classic work, distinctly states that the emmetropic eye is one with a small amount of refractive error, which must not exceed

* Read before the Charity Hospital Alumni Society, at the May meeting, 1893.

$\frac{1}{40}$ or 1.00 D.; and further he says, "So long as astigmatism does not essentially diminish the acuteness of vision, we call it normal, and if it amounts to $\frac{1}{40}$ or more, it is abnormal. To-day we correct, when necessary, one-quarter of that amount, and treat that as a refractive error, which can, and very often does, cause a great amount of annoyance and discomfort." It is well to bear in mind in this connection that Donders lived in Holland, and that here we lack the placidity and phlegm which characterizes the Hollanders. If our atmosphere was as non-exhilarating as theirs, then, perhaps, we would not work under such high nervous pressure, and eventually become phlegmatic and not suffer from so many nervous disturbances.

Binocular vision, with which most human beings are endowed, is a complex function requiring the harmonious co-operation of several cerebral centres, cranial nerves, and the sympathetic system; the second, third, fourth and sixth, and perhaps, in a manner, the fifth cranial nerves, as well as the sympathetic, are called into play for its proper performance. The refraction of the eyes, and the ciliary and external ocular muscles, may individually or collectively be at fault; as a rule, it is the refraction which is faulty, with secondary involvement of the muscular system. A common example of this rule is seen in convergent squint, where, owing to deficient refraction, it is easier to sacrifice binocular vision and work with one eye, with the result that the external rectus of the squinting eye becomes weakened and the opposing muscle over-developed.

During the past ten years, a great deal has been written on the eye as a disturbing factor in the physical economy; many claims have been made which the lapse of time have shown too roseate, and, like the Scotch verdict, not proven. It is not my purpose to enter into discussion as to the relative merits of eye-strain, pure and simple, versus muscular insufficiencies, but simply state facts I have gathered while treating my patients.

Epilepsy, I have not had any reason, from my personal experience, to consider to have been caused by eye or ocu-

lar muscular strain; and I have never seen any permanent good from eye treatment.

Chorea.—I have often seen much benefit by correction of ocular defects, but I do not consider ocular defects as a cause.

Neurasthenia—Nervous Prostration.—I consider the eyes as important factors in producing this condition, and I have found immediate relief from appropriate eye treatment. I cannot speak too strongly on this point, inasmuch as I feel quite satisfied that in the case of the bodily weak, with much refractive error, the strain was so great as to produce this condition, which, when the strain was removed, the patients rapidly regained health.

Under this head, we can include mental depression, with physical debility and great irritability; protracted labor, both mental and physical, become an utter impossibility; functional heart and stomach troubles, with headaches and disturbances of the vaso-motor system. We can have many of the symptoms isolated; for instance, great mental depression, dread of impending evil or misfortunes, which cannot be shaken off. The working capacity, either mental or physical, in some of those cases, need not be affected simply; when they have leisure time on their hands they worry and make themselves miserable, while, in the case of others, the whole nervous system is so affected that application of any nature becomes impossible. They are unstrung, not sick enough to give up and go to bed, but incapable of doing anything which calls for much mental or physical exertion, complaining, at times, of a dull, heavy feeling in the head, at times dizzy and confused. A general malaise.

Cephalalgia and Neuralgia, especially when affecting the ophthalmic division of the fifth nerve, are frequently due to eye-strain. Many patients, when questioned as to headaches, pains, etc., will tell you that they have no headache, but are subject to neuralgia—the word represents to them an entity—a disease; and as to looking further for a cause, they answer, with an air, that neuralgia is good enough for them.

Migraine—Megrim—Sick Headache—Nervous Headache—Bilious Headache—or Hemicrania—called by various names. Writers on nervous diseases are apt to include a variety as ophthalmic migraine, when, if the truth were but fully known, the great majority of all these cases are ophthalmic in their origin, and the exceptional ones are due to organic brain diseases.

We meet with migraine during the active period of life while the eyes are most used. We find further that patients who suffer from more or less periodic attacks are quite frequent sufferers from eyeaches and headaches—frontal, temporal, and occipital. I am unable to say whether women suffer more than men, from the fact that I have never gone over my cases with that end in view; it is claimed, however, that women are more liable to the attacks than men. At time, I was inclined to think that women were more liable, but then women are more apt to complain of these attacks.

The books mention two forms—the congestive and the anæmic—but, in my experience, the anæmic is the form usually seen; but toward the end of an attack, there is relaxation of the blood vessels, eyes congested and blood-shot, more or less flushing of the face with bounding pulse. In the same individual, the attacks vary in severity and duration—some are so slight as not to prevent attending to ordinary business, while other attacks put the patient *hors du combat*, and, to the uninitiated, looks as if dissolution were imminent. In the majority of cases, the attacks begin with a feeling of discomfort, malaise, dull headache, beginning on one side and soon involving both, and often with pain in the eye-ball; others complain of dizziness, while some few have scarcely any headache, but a feeling of distress and oppression, with disturbances of stomach, which may be mere nausea; while others have violent retching and vomiting. In some cases, I found a tingling of half the hand, with difficulty in speech; but these are not common forms; the eye symptoms vary very much—obscuration or blur of objects, scotomata, and light phenomena, kaleidoscopic in character—half blindness, *blindness*, *heminopsia*.

These eye symptoms last from five to thirty minutes, with great intolerance of light. Head, eye, stomach, is the usual order of an attack; and if sleep is obtained, the patient awakens as if nothing had happened.

We are all of accord that the human system has its limitations of work, and that this holds especially good of a highly organized and sensitive organ like the eye. Allowing seven to eight hours' sleep, we use our eyes at least sixteen hours daily. We know that some eyes are so constructed that unless the eye-lids are shut, they are in more or less active strain; therefore, it is not surprising that a train of nervous disturbances are likely to follow. Such cases are in a vicious circle; the eye-strain causes pain and nervous disturbances, which, in turn, interfere with assimilation and nutrition, so that the reduced physical vigor leads again to more frequent pains and nervous disturbances.

We find disturbances due to eye-strain depending on *age*, *condition of health*, and *avocation*. Occupations demanding a range of vision under eighteen inches suffer most, especially if the health is not good. For the uninitiated, it is not easy to obtain from the patient any clues to the cause of the trouble. We are all more or less proud of our visual power, and any suggestion as to the likelihood of the eyes being faulty, and the cause of trouble is not responded to with alacrity, especially if the vision is good and there are no eyeaches. In those doubtful cases, the proper thing to do is to use a mydriatic, and one of the most satisfactory I find is a combination of homoatropine and cocaine, the disagreeable effects passing off in one day; exceptionally, I use atropine, especially in the case of young people with myopia.

As to the correction of refractive errors, 0.25 D., when worn by the patient, often gives relief; and, in this connection, I might add that the glasses can be used for close work; and if this does not give entire relief, then they should be worn constantly, at least for a time, until relief is obtained. Very high errors in my experience are not so

apt to cause reflex disturbances as smaller ones, from the fact that in the cases of high refractive errors the patients soon learn the limitations of their eyes and act accordingly.

In all obscure nervous cases, when we are in doubt as to the cause, we owe it to ourselves, and to our patients, to have the eyes thoroughly examined and the refractive error, if discovered, corrected.

There is a very large number of persons near the borderline of health and sickness, and it takes but little to have them gravitate one way or the other. They are not necessarily neurotic, but if there is a slight amount of oversight or astigmatism, they find little relaxation in the ordinary channels, such as theatres, sight-seeing, and travel; for inasmuch as the demands on their eyes are so great, that it is usually followed by an aftermath of pain and nervous disturbance.

In the case of the robust, long-continued over-work uncovers latent ocular defects, which may be slight; enough, however, to disturb mentally and physically.

Binocular vision, owing to the numerous cranial nerves and sympathetic system necessary for its satisfactory accomplishment, opens up a very large field for reflex disturbances.

In conclusion, we are all apt to forget that the human eye, wonderfully constructed as it is, is not a mathematically perfect piece of mechanism.

Standard Remedies for Physicians' Prescribing.

I must compliment you on the neatness and convenient manner in which you have prepared the Standard Remedies for ready use for the busy physician, who frequently has not the time nor the apparatus to prepare a remedy in so neat and scientific a manner. Let me thank you for your efforts to relieve both doctor and patient of great inconvenience.—W. W. J. ATKINSON, M. D., Clarksburg, Mo.

ART. IV.—Defective Eyes Among Pupils in the Public Schools of Washington City.*

By E. OLIVER BELT, M. D., of Washington, D. C.

By numerous examinations made in the schools of this country, and of Europe, it has been found that comparatively few children are near-sighted when they first begin school, but at the end of school life a large percentage have this defect.

According to a paper on the subject by Dr. S. D. Risley, of Philadelphia, in an examination of the eyes of 1,133 school children in the city of New York, 3.55 per cent. were found to be myopic, or near-sighted, at seven years of age, while at twenty years 26.79 per cent. were near-sighted. In St. Petersburg, Prof. Erismann found, in 5,348 pupils, 13.6 per cent. of myopia in the primary, and 42.8 per cent. in the highest classes. In Germany, the rise was from 11.1 to 62.1 per cent. The fact of this increase of near-sightedness during school-life being established, the important point for the physician to consider is its cause and its prevention.

Whether myopia is a result of a higher civilization, and consequent abuse of the eyes by over-work, producing defects which are increased as they are handed down from generation to generation, or whether due to constant application for too long a time in rooms improperly lighted, etc., are questions which present themselves. It is also found that hypermetropic or far-sighted eyes are most common in the primary grades, and there is a marked decrease in this defect by the end of school-life; while the percentage of eyes with normal refraction remains about the same throughout the different grades.

Now, are the eyes which become near-sighted those which were normal, or are the far-sighted eyes unhealthy ones? and do they change their refraction to normal, and then continue to change till they become myopic? These are un-

* Read before the Medical Society of the District of Columbia, May 17th, 1893.

settled questions, which should be determined if we wish to prevent these increasing defects.

That heredity and older civilization have much to do with the frequency of myopia, would seem to be indicated from comparisons made between pupils in Europe and in this country, and I have thought a comparison between the eyes of white and colored pupils would throw additional light upon this point. Whether there is a tendency for hypermetropic eyes to become myopic, could only be determined by examinations of the same pupils for a series of years through the different grades. With these objects in view, I applied to Prof. W. B. Powell, Superintendent of the Public Schools of the District of Columbia for the privilege of making the examinations.

Prof. Powell at once took a deep interest in the investigation, and gave me permission to examine as many pupils as desired, in both the white and colored schools. Not having completed the examination in the colored school, this report is the summary of results found in the Grant school only, which is composed of white pupils, mostly from the middle walks of life.

Mr. S. M. Ryder, principal of this school, took an active interest in the matter, and gave me valuable assistance, especially in securing consent of the parents for the examinations.

Two hundred and ten pupils were examined—15 boys and 15 girls from each grade except the first. Their ages ranged from 7 to 15 years. All defects were noted. Cases of myopic astigmatism were placed under the heading of myopia, and hypermetropic astigmatism under hypermetropia. The refraction was tested with lenses, and by retinoscopy. Errors of less than 0.5 D. were not noted, except in astigmatism; 14 per cent. of the boys and 17 per cent. of the girls complained of headache, or painful eyes. This was most common in the eighth grade. There was only one case of color-blindness, less than .005 per cent., and that was among the boys.

By most authors, the usual percentage of color-blindness

is from .03 to .05 per cent. among males, and less than .01 per cent. among females. I am informed by Prof. Powell, that the pupils in the public schools here are taught the colors; so this lessened the possibility of color-ignorance being mistaken for color-blindness.

There were only four cases of amblyopia (defective vision without assignable cause), and all were among girls. There were 10 ($.02\frac{3}{10}$ per cent.) diseased eyes, aside from errors of refraction and cases of conus; 5 were cases of choroidal atrophy, 4 were cases of corneal opacity, and there was 1 cataract. There were a few cases of strabismus, and some blepharitis.

Conus or pigment about the disc was found in 15 per cent. of the cases of emmetropia, or normal refraction; in 21 per cent. of the cases of hypermetropia or far sight, and in 16 per cent. of the cases of myopia or near sight. These are the eyes which are thought by some to change their refraction, but this can only be determined by successive examinations of the same eyes, from year to year, through school-life. Slight pigmentation about the disc is probably not always pathological. Normal acuteness of vision was found in 80 per cent. of the boys, and 68 per cent. of the girls.

The following was found to be the average refraction:

	(Normal.) Emmetropic. Per Cent.	(Far-Sighted.) Hypermetropic. Per Cent.	(Near-Sighted.) Myopic. Per Cent.
Boys,	.71—	16+	12+
Girls,	.49+	31	19+
Total av.,	.60	.23+	.16+

The number of pupils examined was too small to get a correct idea of the decrease of hypermetropia, and the increase of myopia from a comparison of the lowest with the highest grade, by comparing the three lower with the three higher grades, we can form an estimate of the changes during school-life. The averages are as follows:

	<i>Em.</i> Per Cent.	<i>H.</i> Per Cent.	<i>M.</i> Per Cent.
3 higher grades, .60		.17	.23
3 lower grades, .59		.31	.10

This shows that the percentage of eyes with normal refraction remained about the same, while there was a decrease in hypermetropic eyes from 31 per cent. to 17 per cent., and an increase of myopic eyes from 10 to 23 per cent.

Errors of .05 D. or less were not noted except in cases of astigmatism, from the belief that it is often impossible to determine errors that are slight without a mydriatic; hence the percentage of hypermetropia is not as high as found by some observers. The refraction found by me, however, corresponds clearly with the average found by different observers in 160,000 eyes examined, which is as follows:

<i>Em.</i>	<i>H.</i>	<i>M.</i>
58.8 per cent.	21.9 per cent.	19.5 per cent.

These figures are from a paper by Dr. B. Alex. Randall, of Philadelphia, to whom I am indebted for some valuable suggestions in reference to the investigation. In the following table, I give the changes in refraction from the beginning to the close of school-life among pupils in several American cities:

	<i>Em.</i>	<i>H.</i>	<i>M.</i>
New York,	.86—61	.09—12	.03—26
	decrease, .25	increase, .03	increase, .23
Brooklyn,	.63—60	.26—15	.09—23
	decrease, .03	decrease, .09	increase, .14
Philadelphia,	.07—12	.88—66	.04—19
	increase, .05	decrease, .22	increase, .15
Washington,	.59—60	.31—17	.10—23
	increase, .01	decrease, .14	increase, .13

CONCLUSIONS.

1st. That children are often near-sighted without being aware of it, and are loth to complain of their troubles, as shown from the fact that although 40 per cent. had defects

which cause more or less discomfort, only 15 per cent. complained of headache, or of their eyes becoming tired or painful upon use. These children, however, frequently give evidence of trouble by not advancing as rapidly in their studies as others of their age, and too frequently are thought to be stupid when, in fact, their eyes are at fault. This is well illustrated in the second grade, in which most of the pupils are 7 or 8 years of age; there were some, however, 10 and 11 years old, 80 per cent. of whom had defective eyes.

2nd. The increase of near-sightedness among Washington school-children is less than in most American cities, probably because their physical condition is better when they begin school. There is less poverty here. A smaller number live in crowded tenement-houses, and their hygienic surroundings are generally better. Then the school-buildings seem to be well-lighted and ventilated, and the seats are arranged so they will not face the light. In some, though, the black-boards are placed between the windows, which is not to be commended. I am informed by Prof. Powell that close application for any length of time is not required of children in the lower grades, much of their teaching at this period being by object lessons. This is a most important point, for at this age the eyes are most easily injured. I think authorities agree with Dr. Risley, who says, "The probability of harm resulting from the school-life diminishes with every added year of age, in all states of refraction."

3rd. The few cases of abnormal eyes found among the colored pupils so far examined, as compared with the white, indicate the influence of the more advanced civilization in the causation of defective eyes. Heredity, also, has much to do with it, and parents with eye-troubles should be especially careful to see that their children's eyes have proper attention, in order that they may avoid the development of the same defects.

The Albany, Seventeenth and H Streets.

GRADES EXAMINED.	Eye. No.	Average Age.	Asthenopia.	Color Blind.		Ambly- opic.		Diseased.		Conus or Pigment about disc.		Em.		H. gl.		H. ret.		M. gl.		M. ref.		H. astig.		M. astig.		H. °	M. °	
				R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L	R	L			R	L
Males, 8th Grade.....	30	15	14	2	.....	.....	2	10	23	76 $\frac{2}{3}$ %	1	.....	4	.....	.....	.....	.....	.....	.....	.....	2	2	3	2	23	76 $\frac{2}{3}$ %	5	14 $\frac{2}{3}$ %
Females, 8th Grade.....	30	14 $\frac{1}{2}$	10	.....	.....	.....	1	3	14	40 $\frac{2}{3}$%	.....	.....	8	.....	6	.....	.....	.....	.....	.....	6	6	10	8	14	40 $\frac{2}{3}$ %	8	26 $\frac{2}{3}$ %
Total.....	60	14 $\frac{1}{2}$	24	2	.....	.....	3	13	37	61 $\frac{2}{3}$ %	1	.....	12	.....	6	.....	.....	.....	.....	.....	8	8	13	10	37	61 $\frac{2}{3}$ %	13	21 $\frac{1}{3}$ %
Males, 7th Grade.....	30	14 $\frac{1}{2}$	6	.....	.....	.....	.....	4	20	66 $\frac{2}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	6	4	6	20	66 $\frac{2}{3}$%	.....	.....
Females, 7th Grade.....	30	13 $\frac{1}{2}$	6	.....	.....	.....	.....	2	6	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	8	2	2	15	6	20	.....	.....
Total.....	60	13 $\frac{1}{2}$	12	.....	.....	.....	.....	6	26	43 $\frac{1}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16	6	6	21	26	43 $\frac{1}{3}$ %	12	20
Males, 6th Grade.....	30	13	7	.....	.....	.....	.....	5	23	76 $\frac{2}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	2	5	5	5	23	76 $\frac{2}{3}$ %	3	10
Females, 6th Grade.....	30	12 $\frac{1}{2}$	7	.....	.....	.....	.....	5	22	73 $\frac{1}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	4	2	2	2	22	73 $\frac{1}{3}$ %	4	13 $\frac{1}{3}$ %
Total.....	60	12 $\frac{1}{2}$	14	.....	.....	.....	.....	10	45	75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	6	7	7	7	45	75	7	11 $\frac{1}{3}$ %
Males, 5th Grade.....	30	11 $\frac{1}{2}$	2	.....	.....	.....	.....	7	22	73 $\frac{1}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Females, 5th Grade.....	30	11 $\frac{1}{2}$	3	.....	.....	.....	.....	11	17	56 $\frac{2}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	60	12	5	.....	.....	.....	.....	18	39	65	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Males, 4th Grade.....	30	10 $\frac{1}{2}$	1	.....	.....	.....	.....	6	22	73 $\frac{1}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Females, 4th Grade.....	30	10 $\frac{1}{2}$	3	.....	.....	.....	.....	2	22	73 $\frac{1}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	60	10 $\frac{1}{2}$	4	.....	.....	.....	.....	8	44	73 $\frac{1}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Males, 3d Grade.....	30	9 $\frac{1}{2}$	.....	.....	.....	.....	.....	2	18	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Females, 3d Grade.....	30	9 $\frac{1}{2}$	7	.....	.....	.....	.....	7	13	43 $\frac{1}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	60	9 $\frac{1}{2}$	7	.....	.....	.....	.....	9	31	51 $\frac{2}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Males, 2d Grade.....	30	8 $\frac{1}{2}$	1	.....	.....	.....	.....	4	21	70	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Females, 2d Grade.....	30	7 $\frac{1}{2}$	1	.....	.....	.....	.....	4	10	33 $\frac{1}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total.....	60	8 $\frac{1}{2}$	2	.....	.....	.....	.....	8	31	51 $\frac{2}{3}$%	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Males—Total.....	210	8-15	31	2	.....	.....	.....	38	149	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Per Cent.....			14	.009	.....	.....	.009	.18	.71	.....	.....	.03	.13	.004	.....	.07 $\frac{1}{4}$ %	.06 $\frac{1}{4}$%	.....	.15 $\frac{1}{2}$ %	.15 $\frac{1}{2}$ %	.15 $\frac{1}{2}$ %	.71	.16	.....	.....	.....	.....
Females—Total.....	210	7-14	37	.....	.....	.....	.....	16	104	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Per Cent.....			17	.....	.....	.....	.....	.04	.49	.....	.....	.03	.30	.04	.....	.14	.14	.11	.16	.16	.16	.49	.31	.....	.....	.....	.....	.....
Grand Total.....	410	7-15	68	2	4	10	72	253	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Per Cent.....			16 $\frac{1}{2}$ %	.004	.01	.02	.17 $\frac{1}{4}$	.60 $\frac{1}{3}$%	.....	.....	.....	.02 $\frac{1}{4}$	.22	.023 $\frac{1}{3}$	.....	.11	.11	.09	.16	.16	.16	.67	.38	.09	.....	.....	.....	.....

ART. V.—*Placenta Prævia*.*

By MARK W. PEYSER, M. D., of Richmond, Va.

Placenta prævia may be defined as that condition in which the after-birth is situated in front of the child, either wholly or partially occluding the os uteri. It may be (1), Central or complete, when directly over the os; (2), Partially central, when partially over the os; and (3), Marginal, when it just reaches the edge of the os.

Placenta prævia was known to the older writers, who believed that the after-birth had originally been situated in the fundus, from which it had become detached, accidentally. The term "unavoidable hæmorrhage" was given it by Rigby, of England, to distinguish it from "accidental hæmorrhage," due to the separation of the placenta at its normal site.

As to the *causes*, we have only theoretical views; the older ones being that (1), The placenta outgrows the uterus; and (2), the lower segment of the uterus outgrows the placenta.

The view that seems to be probable is this: The decidua vera reaches to the internal os, and is continuous with the decidua reflexa on the under surface of the ovum, above which is the decidua serotina. When the serotina is incomplete, villi persist in the reflexa, and if, at a later period, the serotinal nutrition prove itself inadequate, new villi grow into the reflexa. This view is advanced by Hofmeier, and upheld by Kaltenbach, of Berlin.

Another theory that is plausible is that of Sawyer, of Chicago (in *N. Y. Med. Jour.*, Oct. 15th, 1889). He suggests that accident may cause the partial detachment of the ovum from its normal site, causing it to rotate downward on its axis and lodge in the lower uterine segment. The detached chorionic villi atrophy, while a new area of the

* Read before Richmond Academy of Medicine and Surgery, June, 1893.

chorion comes into contact with the uterine wall, and new villi develop.

The symptom of placenta prævia is hæmorrhage, with or without pain. The sudden occurrence of hæmorrhage early causes suspicion. At first, the flow may be scanty, and arrested spontaneously; but, if left to itself, will recur in the same unexpected way, becoming more and more profuse and corresponding, in point of time, with what would have been the molimen. This is, probably, on account of the physiological congestion of the genital organs then present.

Hæmorrhage rarely occurs before the sixth or seventh month, and is sometimes postponed until labor. In the case reported at the end of this paper, it came on at the fifth month.

Upon vaginal examination, no sign of the presenting part may be detected, but there is a soft, boggy feel about the lower segment of the uterus, and the placental mass is felt at the internal os.

The immediate source of hæmorrhage is the lacerated utero-placental vessels.

Sometimes placenta prævia will terminate naturally when the pains are strong and delivery rapid. Then, there is no hæmorrhage of consequence. Barnes explains this thus: He divides the cavity of the uterus into three zones (known as Barnes' placental zones); an upper (safe); a middle, stretching from the lower part of the upper zone to the internal os; and a third, from the second to the external os, partially or completely covering it. When there is no hæmorrhage, it is due to the occurrence of pains rapid and strong enough to complete separation of the placenta and close the sinuses before flooding can take place; or, the hæmorrhage ceases, not necessarily before the after-birth is expelled, but because the portion attached to the dangerous area is detached.

There are two methods of treatment—the expectant or temporizing, and the immediate.

The *prognosis* seems to prove that the latter is the better of the two. Out of thirteen cases reported, seven were de-

livered by the immediate interference plan. Of these, all the mothers recovered, and four of the children died. Of the six treated by the expectant plan, one mother and two children died. In three other cases of expectant treatment, one mother contracted severe hysteria from anæmia, and died, as did the child. In Case II, expectant treatment was begun, but, on account of the alarming hæmorrhage, the immediate was substituted, mother and child surviving. In Case III, the patient was brought to term, everything proceeding normally. This rarely happens in temporizing.

The plan of immediate treatment which I present to you is that of Braxton Hicks:

"After diagnosis is made, proceed as early as possible to terminate pregnancy. When once we have commenced to act, we should remain by our patient. If the os be fully expanded, and the placenta marginal, rupture the membranes and wait to see if the head is soon pushed by the pains into the os. If there be any slowness or hesitation in this respect, employ forceps or version. If the os be small, and the placenta more or less over it, detach the latter carefully; and should there be no further hæmorrhage, we may wait an hour or two. Should the os not expand, dilate. If the forceps can be admitted easily, use them; if not, employ the bi-polar method of version, bringing down the breech or a leg to act as a plug. After this, the case may be left to nature, with a little gentle assistance, as in foot and breech cases. Where the fœtus occurs before the end of the seventh month, version, by the combined method, is the best plan."

To these rules, Jaggard, of Chicago, adds another: "If routine method be followed in all cases, bi-polar version gives the best results."

In connection with this subject, I have only one case of my own to report:

Multipara, aged about 35 years. Commenced flooding at 12 M. I arrived at the house, in company with Dr. Wm. R. Jones, of the Retreat for the Sick, at about 4:30 P. M. Over a pint of blood had then been lost, and collapse was threatening. Upon vaginal examination, the os was found to be widely patulous, and placenta prævia complete.

Pains were on in full force, and hæmorrhage continuous. Combined with these was the fact that there was no proba-

bility of the woman receiving proper attention, and, therefore, we decided on the immediate interference plan.

The placenta was entirely separated from the uterus; the membranes ruptured. The child was, thereupon, immediately expelled. It was dead. All of the clots in the uterus were turned out, and very hot water injected, the flow ceasing entirely.

Collapse again threatened, but was aborted by hypodermics of whiskey. Ergot was administered by the mouth.

Here delivery was so rapid that even had we wished to turn in order to bring down the breech or a leg, it would have hardly been possible. The woman made a good recovery.

To my mind, the life of the child is as nothing when compared to that of the mother; and for that reason, wherever possible, I shall work on the immediate interference plan.

1222 East Broad Street.

ART. VI.—Post-Operative Sequelæ of Pelvic and Abdominal Surgery.*

By JOSEPH PRICE, M. D., of Philadelphia, Pa.,

SURGEON-IN-CHARGE OF THE PRESTON RETREAT.

The occasion and peculiar auspices under which I appear here could scarcely fail to be to me somewhat embarrassing. I cannot avoid a feeling of inadequacy for a work which, on account of its momentous importance, should be well done. It may be claimed that all has been said; then what I say I only throw in as confirmatory of that which is accepted as complete. That all has been said, and the best done, is a shallow assumption. We are just beginning to talk, and that but stammeringly—and, as yet, much of our surgery is bungling and blundering. We do not esteem the facts we have as all there are. We prize our advances the more

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for their promise of something better; we find in them prophecy of yet more splendid development and yet greater discoveries in our science; more originality and greater simplicity of method. Our country has given us great names to place beside those on the other side of the ocean. Yet we need to greatly multiply the reasons for our boasting.

Personally, we hope to avoid pretension, to give out only those lessons our experiences have taught us. My deductions will not be theoretical, but those drawn from actual experience. The importance of adopting simple and direct methods—those tried, tested and practiced by a number of successful operators—should influence all beginners in the choice of methods. The fact that A and B have been the most successful operators, that their mortality has been low, that they complete their work at any cost, that serious post-operative complications have been of rare occurrence, are facts worthy of serious consideration by the practically inexperienced. We have a valuable surgical literature recording for us the methods which have withstood successfully many tests in the experience of our best surgeons. By careful study of this literature, which is at easy command, there can be gleaned many lessons that will serve a good purpose in puzzling and trying cases, such as come to every surgeon, no matter what his skill.

Though we have been rapidly simplifying our somewhat ambiguous surgical nomenclature, there is still much confusion—lack of definiteness of application in many of our terms. In discussing post-operative sequelæ, and some of the causes leading to the same, we will not concern ourselves as to terms used to designate pelvic and abdominal conditions, those having for us no very special clinical value. The endeavor will be to use such terms as will make our meaning clear. We hope we have a better understanding—a clearer conception of our subject—than we have of any dead language, the Latin or the Greek, so that you will not need an English, Latin or Greek glossary to get at our meaning, and that our facts are such as can be made plain, even

through limited and imperfect English. In our work, the sequelæ of what we do is the one supreme concern. Notwithstanding the sequel of many procedures have been a fruitful source of skepticism with many, the gynæcologist and obstetrician have gone on, and through improved skill and technique have brushed away many old objections and obstructions; they have grown in the consciousness of their ability to deal successfully with cases which, in a near past, were allowed to suffer on without relief. We have arrived at the point of knowing that many women suffer from diseases that cannot be cured, or even relieved, of their severer symptoms by purely medical treatment; that we frequently meet with pathological conditions that medicine, massage, or electricity will not relieve; that grow from bad to worse, and that only surgery can reach; that for many cases, there are only two avenues of relief, skilful surgery or death.

Here I would mention that a great number of deaths are of patients where there has not been even a suggestion that surgical interference would save life. In many instances, death comes before the physician even recognizes the character or gravity of the trouble—before a correct diagnosis; and again to that group classed by operators as hopeless when first seen, who are permitted to suffer on and die without an attempt being made or offered for rational surgical relief. Again, a third group, a most distressing class to the surgeon, is willing to give the one chance, those who die on the table, or soon after the operation—never re-act. There is current, among the more or less intelligent laity, and the more or less, usually the latter, intelligent non-specialist, and general practitioner, a belief that the results in abdominal and pelvic surgery are either eminently successful or else woefully responsible for a train of after-results in the unfortunately surviving patient, that render it scarcely a permissible branch of surgery, unless the former results can be absolutely promised.

Just why this should be is a little difficult of explanation unless the early history of this special line of work is considered, together with the methods of certain operators, with

whom promises were a part of the means by which operation, in many cases, was obtained. In no other division, either medicine or surgery, is it demanded of the physician that his results be absolutely certain, and that he guarantee after-immunity from all trouble allied to that which he undertakes to remove. Unfortunately, there are some at present, possibly not so many as formerly, who, in order to obtain chance for operation, are ready to promise everything, just as the ready-witted politician has offices waiting for every one whose franchise shall be cast for him. Mrs. X shall have no more pain, while Mrs. Z shall absolutely be relieved of every appearance of her monthly disturbance, while Mrs. Q shall never again suffer constipation or tenesmus, and so on throughout the whole catalogue of diseases, for which operation is ever done or suggested. Now, this was all unfair both to patient and operator. Operation is done definitely to remove certain diseased conditions, and to remedy aberrant physiological conditions incident thereto. Any more than this cannot be promised. No more than this is promised in the treatment of every other disease. The physician called on to treat a case of typhoid does not insure his patient, in the event of his recovery, total immunity from all the sequelæ incident thereto. Neither does he, on taking charge of the case, give absolute assurance of the recovery itself. Neither should the surgeon be required to do so except within the limits of his own experience in the conditions for which he is about to operate. No surgeon should promise recovery to his patients on the grounds of the results of others, unless his own experience is absolutely parallel with theirs. The beginner in abdominal and pelvic surgery, unless after a long and careful preliminary training, and unless accompanied in his work by a careful and experienced operator, must usually have less perfect results than the surgeon of a wide and intelligent experience. I say intelligent, because there are operators and operators, but some with a wide and varied experience must never be looked to to surpass the line of mediocrity. An operator who, in the midst of a serious case, looks about him, and

addresses the spectators, "Now, gentlemen, if you have any suggestions to make, I am ready to receive them," is hardly the man any one of you would select to operate upon wife or mother. A general must be quick-witted, ready to modify the details of his movements, to meet the strategy of the enemy, but he must needs use his own wits, and not delay to send home for advice.

Now, all this, you may say, is foreign to the subject at hand, but I beg to submit that post-operative complications and sequelæ have to do with all the factors casually suggested in these prefatory remarks. For your more intelligent appreciation of the same, I shall divide them, group them, if you please, as I have most frequently met them, into three classes:

First. Post-operative sequelæ due to complications induced by delay in operating.

Second. Complications induced by faulty work and methods.

Third. Sequel, which may be said naturally to follow any serious surgical procedure of the nature under consideration.

Incidentally, as following along the line of thought here suggested, will be considered the ways and means best adapted, in the light of surgical experience, to avoid the avoidable in the way of unsatisfactory results in this branch of surgery.

Delay in operating is at once the bane and danger of all pelvic and abdominal surgery—baneful to the surgeon, dangerous to the patient. This is true in all the various conditions met in the pelvis and abdomen, but especially true in two diverse conditions—pus in the pelvis and in tumors of the uterus. I have long earnestly advocated the prompt removal of all puriform degenerations in the pelvis; and the longer and farther my experience grows, I find I have no reason to change it. The logic that hesitates at an early amputation, in order to save an inch or an ell of a leg, while thereby life may be risked, is only half-way foolish as compared with the procrastination that dwaddles with puri-

form disease, involving the integrity of the vital abdominal viscera. Pus within the pelvis is at once a present and a far-reaching menace to the safety of the patient. Its extension is not limited geographically, nor automatically, nor functionally. Pus that starts in the tube may burrow through the diaphragm, or show itself in a pulmonary abscess, while an appendicitis may rush through like a Johnstown flood, and assail the very vitals of the economy.

Now, while the results of retained and imprisoned pus may be thus fulminant in their nature, they may also be insidious, slowly attacking the vitality of the sufferer, bringing on a train of evils, which, like gossip, growing with a thousand tongues, gains by going, and is dangerous apace. Pus, if it is not absorbed, is irritating, and excites inflammation, and inflammation brings about adhesions among the organs surrounding the pus focus. So it is, that an inflammation starting in one organ, often necessitates surgical interference with another entirely distinct from it physiologically, and distinct from it anatomically. Bowel adhesions are most common in delayed tubal operations; and where the puriform degeneration has gone beyond a certain time, the bowel, instead of being adherent, is often really gangrenous, and its treatment brings into the field the most delicate and painstaking intestinal surgery.

Now, in these cases we must look upon the intestinal surgery from two standpoints, to-wit: both in the light of operative complications, and of being indirectly the cause of post-operative complications and sequelæ. Its presence as a complication of the original operation for the removal of the pus-tube is incident to delay in the original operation, and is a necessity on account of this delay. Without it the operation, as at present necessitated, would be a failure or a very bleak success. But if, on account of this necessary bowel surgery, there is after-trouble brought on by stenosis and diminished calibre of the gut, is the surgeon or abdominal surgery responsible for such result, however unfortunate it may be? Can such sequelæ be, for an instant, considered argument against either the results or legitimacy of

abdominal work, or against the perfection of its methods, apart from preceding calamitous neglect? I think the good judgment of all must decide that in such cases surgery has not had its chance.

And so, if after a case has been neglected until a general peritonitis supervenes, after a long period of pus infection, and consequent loss of vitality in all structure, so that, as often happens, the stitches in the abdominal wall will scarcely hold, and there is a consequent necessity for the whole incision to heal by granulation, can it be charged to surgery that its methods have been faulty or inefficient? Certainly not. Whatever after-complications there may occur, as of adhesions, hernia, fistulæ, or else of this uncanny clan, must be laid directly at the door of bad logic and poor wisdom of those to whom the delay is attributable.

The same reasoning, and possibly with even a greater scope in the possibility of the complications, will apply to neglected cases of uterine tumor. These are apt, as you all know, to be tampered with by every agency under the sun. Each and every dilly-dallier is busy seeking methods, and modifications, and refinements of dilettante-quixotism, in order the more to steer shy of the true surgical treatment, of which they have a mere smatter of knowledge, and this but theoretical, not practical. While these empirical devices are being put into practice, the disease travels on apace, the tumor increases, and transgresses upon other important organs, interferes with their integrity by pressure, contracts adhesions with bladder, intestines, and omentum; and so the disease steadily progresses, the tumor increasing in size and irregularity, which, with the increased density and thickness of the adhesions, makes its removal a daily increasing difficulty. This is all the more likely to be true if it is tampered with by electricity, with or without puncture—all the more if puncture is used at all.

It will be understood, at a glance, that the reasoning that applies to the two distinct affections here alluded to must surgically apply to all diseases of the pelvis and abdomen. This is probably true of appendicitis, than which there is

not a more neglected disease, nor one in which so much is trusted to nature. Delay here is the very essence of danger, and often puts us, once and for all, outside the possible chance of relieving a patient. It is unnecessary for me to further insist upon this fact. Both your instructors and your instruction are *en courant* with all that is best on the subject.

Under this head, it is again only necessary to insist that whatever is logic in one set of abdominal diseases, from a surgical standpoint, is logic in all, and that early surgery, soundly applied, is the *open sesame* to all success in their treatment.

The second series of complications I have classed as those due to faulty work or methods. Under this head, I have most frequently found adhesions about the incision, or, indeed, throughout the abdomen and pelvis, due to the presence of irrigating fluids. It used to be thought that chemicals were the highway to cleanliness; that an otherwise dirty surgeon could be clean if he had a basinful of bichloride solution at his side, as a sort of dirt "Taboo," so to speak. This had its effect in the complications under notice, and the banishment of this harmful superfluity has worked good in many ways, first by taking away a frequent cause for re-operation; and, second, in teaching operators that cleanliness is an essential, inherent trait of the man, and cannot be grafted on him by chemicals.

While considering adhesions, it may be well to refer to their imperfect handling as a very pregnant cause of unsatisfactory results in pelvic surgery. When they exist, they are not to be attacked wildly and rudely, but are to be broken up carefully, and each step guarded by careful inspection. If, by chance, the gut is torn through, it is at once to be mended, all else being, for the time, suspended, unless it is the stoppage of hæmorrhage. Tears in the omentum are to be dealt with after the same manner otherwise, pitfalls are left for the unwary intestine, whereby to strangulate itself. All peritoneal destruction is to be avoided, and any portion of surface operated upon, that

can be covered with peritoneum, is a direct safeguard against adhesion; this is especially true of large, fleshy pedicles.

In the removal of diseased organs, it is necessary carefully to break up, not only the adhesions existing between the parts removed and those remaining, but also those between all remaining parts otherwise healthy. Failure to do this is a fertile cause of bowel obstruction, resulting fatally in cases that would otherwise recover.

Coming next in order as a fertile source of mischief is the faulty handling of hæmorrhage. At the bottom of much hæmorrhage is the reprehensible use of cat-gut. The use of this agent ought to be avoided; except in the very smallest vessels, it is not so safe as silk, and the latter has too much to recommend it, too many successes on its side, to be theoretically argued out of sight. The careful tying of every bleeding vessel as it is met, and of pedicles in portion small enough to secure perfect stricture, with sufficient button to prevent slipping, will give security against most of the causes of hæmorrhage as it most frequently occurs.

Just here I will refer to a method, or rather a procedure, by which all surgery, especially that of hæmorrhage, is presumably made easy. I refer to the Trendelenburg position. This was originally invented for the performance of suprapubic cystotomy. Those of you who have seen this operation know just how much need there is here of the Trendelenburg position, and in my opinion there is but little more use for it anywhere else. In all operations in which hæmorrhage is likely to occur by oozing and indirect leakage, it is a positive disadvantage. The patient is stood nearly on her head, and the natural gravity of the blood reversed. Now this, together with a weakened circulation, and the presence of surgical shock, will apparently give a dry field of operation, which, when the natural recumbent position is assumed, will at once become prone to oozing and leakage, which may soon become a serious matter. All oozing must be controlled, and any step which veils or conceals its presence is a menace to the safety of the patient.

In this connection, we may profitably consider improper drainage as a cause of serious complication in operation. Drainage, as a surgical necessity, is well-recognized in operations of all kinds. Under certain conditions, its employment is not disputed or questioned, except in the abdominal cavity. Why this is so, is not always easy to explain. In fact, it is probably best not to attempt to explain every vagary that, comet-like, flits across the unsettled minds of many following the plow in the furrow of abdominal surgery. It is enough carefully to listen to the arguments on each side, weigh them well, see wherein is contained the least fancy and the most facts, and follow the lines of presumptive safety. Much of the dissatisfaction over drainage is the result of crude methods and faulty care of the tube, and indeed of the patient. Most of those now condemning drainage have vacillated between one method and another, and finally, without having gotten satisfaction out of any method, they condemn all. Gauze, lamp-wick, bone-tubes, new devices to keep the tube clean, all have failed, and like King Solomon, after he had gone the rounds, they cry, "Vanity of vanities, all is vanity." The proper way to apply any method is to study the end to be attained, and then use means to accomplish this end.

To remove accidental debris, irritating, or accumulating fluids, there is nothing that so well answers as the small glass drainage-tube, reinforced with the long-nozzled syringe. All other device is unnecessary. Gauze is a good primary, but a poor secondary drain. It will not discharge lymph, nor will it insure the non-disturbance of the parts on its removal as is afforded by the simple tube. It likewise promotes adhesions, and these are the factors necessitating much after-surgery in the abdomen. All foreign matter introduced, at the time of operation must come under the head of irritants, and this is true the longer it remains, unless it is absolutely clean, and kept clean, or, in fact, unable to get dirty. So the improper handling of the drainage-tube, its shifting or its rude handling, may make it, in careless or unskilful hands, a source of danger and

discomfort to the patient. This is, however, no argument against its proper use, and the operator who gets bowel fistulæ from it simply confesses that he has placed it improperly, while he who lays ventral hernia to it as a prime factor forgets that herniæ rarely appear in the lower angle of the wound, where the tubes should always be placed.

Under the head of foreign bodies, as a cause of mischief, it is necessary to class big and unnecessary ligatures. Many small vessels can be secured by torsion, whereby tying is rendered unnecessary. When this can be safely done, it is by far preferable to the use of multitudes of ligatures. Big, heavy, braided silk is apt to cause trouble by its non-absorption, and by making a focus for suppuration. Hence, it is the rule to avoid heavy ligatures, past the absolute necessity of each individual case, and to apply as few as possible. Big ligatures are probably oftener at the bottom of abdominal fistulæ than any other factor, unless it be in those of a fæcal nature. These latter are caused by failure to mend weakened spots in the gut, or by badly-placed drainage-tubes.

I have neglected to consider one point in reference to drainage, and to do this I shall go back for a little. I mean the consideration of the after condition of the patient. She is always quiet except in the rarest cases, her recovery is non-febrile, her tongue is clean, her secretions normal. I am speaking, of course, of cases in which there have been pus and adhesions. In simple cases this condition of affairs ought always to obtain. This is a marked contrast with cases in which drainage is not used under similar conditions of operation. The contrast is as marked as that laid down in the books between concussion and compression of the brain. The quibblers cry your operation has not been clean, or you would not need drainage; and again, before this alarm has died away, another investigating army explain the use of the tube away because it infects the stump and carries millions of microbes into the abdomen. Here is at once a confession and a plea. First they do not know when or how to use the tube, and, second, they explain it

away on the ground of its causing what, on the first hand, they confess is a necessity for its employment. Such argument as this needs but little attention.

Passing on, I shall class as imperfect surgery all that leaves behind removable diseased organs or conditions. Under this head must be placed vaginal puncture for pus in the tubes and the vaginal removal of diseased organs. Both of these operations are unjustifiable, first, because they are incomplete, and, second, because they do not allow the operator to manipulate freely enough to entirely relieve the patient either of her danger or discomfort. Pus tubes are not a simple condition, but are complicated with adhesions, and, therefore, in order to deal with these, all the vantage ground of operative position must be sought. This is impossible in the vaginal operation. Adhesions in pelvic disease are often the bulk of all the trouble, and hence they must not be left. Abscess of the pelvic organs is rarely a simple sac, and, therefore, cannot be cured by mere puncture. That once in a while such a case is met is no argument by which a general method is to be laid down. Enucleation and removal, drainage and freeing adhesions is the only proper mode of procedure.

A word now as to conditions following operation, traceable often to bad care of the patient, or to improper surgical procedures. At the top of these is ventral herniæ. Many patients are directly responsible for their own condition in this respect. Too early rising, too early laying aside the bandage, and foolish physical exertion, such as dancing, riding, and the like, frequently bring on the condition for which the surgeon is in no wise responsible. But, on the other hand, over anxiety of the surgeon to get an empty bed in his hospital, or to chronicle a wonderful recovery, are among these secondary, non-surgical causes of this accident.

The incision and its closure are carefully to be considered in this accident. A short incision, with the stitches uniformly introduced on either side, so as to preclude turning in, is the best safeguard against this accident. I personally

do not agree with those who introduce layer after layer of sutures. Again, it is a recognized fact that incision through one of the recti is less apt to cause hernia than linear incision. I submit that a series of carefully-watched operations on this line would be of the greatest interest.

I have now gone over some of the chief causes of accident and complication in abdominal work, enough at least to give you food for thought in the lines of real experiences without any theory whatever; and it remains for me only at this time briefly to refer to some of the after conditions of operation for this set of diseases, which naturally are to be expected. First are the phenomena attending the removal of the appendages. All women are not affected alike. Some endure their removal with immunity from discomfort, while others are for a long time annoyed with the phenomena attending the menopause. Hence, it is not safe at once to promise perfect comfort to these patients, nor indeed to tell them even that the menopause will infallibly at once ensue. Some women persist in periodic hæmorrhages; some cease at once; others continue more regularly than ever. The why of all this is not clear. Again, in chronic cases, where the pain and discomfort has lasted long, the recovery is often more or less tedious. Pain has become engrafted upon the organism, and only time will remove it. To patients such as this, the encouragement must be given to await patiently the gradual restoration to health, just as they would expect to do in the external surgery of the body. Miracles are not to be expected here; neither is it fair to promise them. The same careful consideration of all the probabilities of the case should here be weighed; the same honest expectation of life and health afforded; no more, no less.

The manner, matter, and methods of abdominal surgery have to deal with humanity in channels that most concern it, and hence they afford scope for the widest humanitarianism, the truest philanthropy, the bravest hearts. Our profession is adjusting itself to the spirit of the period—to the spirit of enterprise, research, and invention.

Clinical Reports.

Two Cases of Foreign Bodies (Splinters of Wood) in Eye for Years Before Other Troubles Began.

By W. H. BAKER, M. D., of Lynchburg, Va.

CASE I.—Mrs. K., aged 70 years, was sent to me by Dr. Rawley W. Martin, of Chatham, Va., about one year ago.

She gave me the following history: When two years of age, her brother, one year her senior, playfully struck her in the eye with a twig; great inflammation and pain followed, which continued for several weeks, then slowly subsided, and the eye gradually reached, to all appearances, a perfectly normal condition, with the exception of impaired vision, and the event was forgotten, until forcibly brought to mind about eighteen months ago, when some particles of sand struck her in the eye, while out in a high wind, causing inflammation and pain, which had continued in spite of all remedies up to the time she consulted me.

An examination revealed a chronic conjunctivitis, aqueous humor cloudy, pupil dilated, and iris pushed forward, with tension of the globe and tenderness on pressure.

An intra-ocular tumor the size of a pea, situated in the lower half of the eye-ball, and just behind the ciliary bodies, was easily detected with the ophthalmoscope.

As the eye gave her a great deal of pain, and seemed to be destroying her health, I decided upon enucleation, and was ably assisted in the operation by Dr. Acuff, of Franklin Junction.

After removing and opening the eye-ball, we found a tumor, smooth and yellowish in appearance, which proved to be a cyst within a cyst, the inner sac containing a brownish fluid, in which was embedded a well-preserved splinter of wood, where it had, no doubt, laid for the past sixty-eight years.

The old lady made a rapid and complete recovery, and is now wearing an artificial eye.

A similar case consulted me about two years ago:

CASE II.—Mr. P., who stated that about thirty years ago, while splitting wood, a flying splinter struck him in the eye. The surgeon who examined and treated the case at that time thought nothing had entered the eye-ball. After a

month or six weeks, the eye had, to all appearances, fully recovered, with very little disturbance of the vision; and it had never given him any trouble until a few months before consulting me, when the vision became very much impaired, without any pain or inflammation. A splinter of wood, about an eighth of an inch in length, was easily seen lying across the anterior chamber, with one end embedded in the iris, and the other end free. As there was not the least irritation or discomfort, I advised him to wait a few weeks.

He returned in a fortnight; the free end had entered the cornea, and bid fair to soon appear externally, when it could be readily removed; still there was not the least irritation or discomfort.

Unfortunately, I did not have the pleasure of following this case to the end, as the gentleman soon left for his home in Massachusetts, but I have no doubt that it was finally removed without the least difficulty.

Whenever the ciliary bodies are wounded, it is always the safest plan to remove the eye-ball, for as long as the defective eye remains *in situ*, it is a serious menace to the safety of the other eye; but when these bodies are not wounded, and the foreign body cannot be located, the patient will do better in the hands of conservatism.

Cases are cited by von Arlt, Pagenstecher, Jacger, and others, where cilia, gun-caps, stone, steel, points of cataract knives, and other substances, have laid in the anterior chamber and uveal tract for from four to ten years without causing the least inconvenience.

Wells records a case that came under his notice a few days after the accident. The place of entrance was easily seen through the edge of the cornea and iris; the media were so cloudy that he could not locate the body; he treated the eye, which recovered with almost perfect vision; and after the media had cleared, he could, with the ophthalmoscope, locate the encysted foreign body. He saw his patient years afterwards, and he was still enjoying good sight.

I think the above recorded cases, with the cases referred to, very clearly prove that it is not always necessary to resort to severe surgical procedures whenever we are convinced

that a foreign body has entered the eye-ball. And the fact that the eye-ball possesses great tolerance for foreign substances, and that patients frequently object very strenuously to severe operations, complicates the matter sufficiently to make us pause and think before operating.

1121 *Church Street.*

(I.) Case of Aphasia Following Twin Delivery. (II.) Case of Obstruction and Sloughing of the Small Intestine—Recovery.

By **A. A. MOORE, M. D.**, of Camden, S. C.,

EX PRESIDENT OF SOUTH CAROLINA MEDICAL ASSOCIATION; MEMBER STATE BOARD OF HEALTH OF SOUTH CAROLINA, ETC.

CASE I.—Aphasia Following Twin Delivery.

Mrs. S. B., age 32, was confined December 27, 1892, with twins. There was profuse post-partum hæmorrhage, with great collapse, necessitating the free use of stimulants. Complete re-action was established in an hour or two, and the case progressed satisfactorily. On the 11th of January, 1893, or two weeks after delivery, she sat up for the first time, apparently quite as well and cheerful as could be expected. That night she went comfortably to sleep, but awoke about midnight groaning with neuralgic pains in her head and neck. Although I was not called in to see her during the night, she was given 60 grains of bromide of potassium, and then slept until morning. The pains having then returned again, I gave her one-half grain of codein, to be repeated in half an hour if not relieved. This, however, afforded only partial relief.

On Friday, the 13th, she drank a part of a cup of coffee. About two hours afterwards, she was discovered in an unconscious condition, and remained so three or four days. During this time, her respiration was somewhat hurried—her temperature ranged from 102° to 104°. Her bowels and kidneys were acting properly. At this juncture, my friend, Dr. A. W. Burnet, was called in consultation at my request. He suggested the application of a blister to the scalp, as there was some dilatation of the pupils, indicating cerebral pressure, as we believed; but the blister drew very imperfectly. In addition to the other treatment, I had also or-

dered hot mustard foot-baths three or four times a day as a revulsive. At the same time, as much liquid food was given her as she could be induced to take. At length, however, she gradually aroused from this unconscious or lethargic condition, but the power of speech appeared to have entirely deserted her. Yet she seemed to fully comprehend what was said to her; for, when spoken to, she would pleasantly smile; when asked to show her tongue, she would immediately do so; or when I would get out my thermometer to take her temperature, she would at once open her clothing. There was not the slightest symptom of paralysis anywhere, for even her tongue, when protruded, did not deviate to either side.

Finally, to our great relief and delight, her speech began slowly to return. At first, when asked any question, she could only reply in the monosyllables, "too me, too me," repeating them two or three times in succession. As improvement progressed, she would make great efforts to express herself, and, in a very impatient or troubled manner, would exclaim, "Oh, I can't." She was unable to recall the proper words for her use, but made ridiculous and painful blunders, although she is an intelligent and well-educated lady.

About the middle of February, or a month after this attack began, it was with difficulty that she could read her Bible. She could spell such words as "reigneth," but could not pronounce them.

On the 27th of February, two months after confinement, I called to see her, and she could not then call the names of her nearest neighbors; and even at the time of this report, April 8th, she has by no means entirely regained her speech.

This is a brief history of this case, recorded partly from notes and partly from memory; and as it exhibits an inability both to remember and to pronounce words, it may properly be termed a case of amnesic or ataxic aphasia; for besides the forgetfulness of words, the co-ordinating mechanism of speech is evidently involved. If the brain lesion, of whatever nature it may be, is such as to seriously and permanently impair the function of Broca's region, then, adopting the "doctrine of the duality of the cerebral organs of language," we may hope for the development and vicarious agency of the corresponding organs of the right hem-

isphere. We therefore believe that the proper treatment of this speech disorder will include such mental and physical hygiene and training as will promote the formation anew and gradual enlargement of the patient's vocabulary. At the same time, we fear that the future of the case is very unpromising as to the complete restoration of the linguistic faculty.

CASE II.—Obstruction and Sloughing of a Portion of the Small Intestine—Recovery.

W. H. Z., age 40, clothing merchant, was suddenly attacked at his store January 21, 1893, with violent pains on the right side of the abdomen. The pulse was weak, and there was some pallor of the face—also spasm of the hands and fingers. I at first thought that I had a case of renal colic to contend with, as the symptoms somewhat resembled those of that affection, although the kidneys and bowels had both acted during the day. Several hypodermics of morphine afforded only partial and temporary relief. He was never entirely free from pain; and the next day the whole abdomen became tympanitic and tender. I then began to suspect that the diagnosis lay between typhlitis and intestinal invagination. In addition to the abdominal tenderness, on a very careful palpation I thought I could feel a tumor in the right iliac region. Up to this time, there had been no further movement of the bowels. This, I thought, however, might be due, in some measure, to the anodynes that had been given. At any rate, although it is opposed to the teachings of the present day, I concluded to venture to give cathartics, but without any effect. As the condition of the patient was becoming critical, I believed any further delay might be fatal, I deemed it imperative to seek counsel, and Dr. A. W. Burnet was called to my assistance.

After mature deliberation, we agreed that we would await until the following day, when, if there was no improvement, we would feel justified in resorting to laparotomy. On the following morning, however, our minds were much relieved by finding that the patient had had two or three bilious actions, showing that the obstruction, wherever and whatever it was, was at least partially removed. Dr. Burnet did not consider it necessary to see the patient again, but left him to my care. But his progress towards recovery was very slow. The tympanitis and tenderness, on deep pressure, continued, the abdominal walls having a leathery

hardness. Fever developed, his temperature ranging from 100° to $103\frac{1}{2}^{\circ}$. Meanwhile, his symptoms fluctuated very much, feeling one day much better, and the next day less comfortable. This condition of things remained until the 14th of February, twenty-four days after he was first attacked, when, with an excessively fetid discharge from the bowels, he passed a portion of intestine. The fetor clearly indicated that the process of gangrene had been probably going on all this time. For a day or two afterwards, the evacuations were of a dirty, watery character, stained with blood, and with a few small clots floating in them, which evidently came from the raw surface left by the slough. He sat up for a short time a day or two previous to the detachment of the slough, but after this occurred, I confined him to the bed, giving a grain of opium occasionally to prevent peristalsis of the bowels, and feeding him on bland and nourishing liquids. His actions gradually assumed a more healthy and natural character, his other symptoms improved, and I now began to hope for a speedy and uninterrupted convalescence, but the end of the trouble was not quite yet. For on the 23rd of February an inflamed, erysipelatous swelling appeared just below the lobe of the right ear, involving a part of the neck and cheek. I at first viewed this unexpected complication with much apprehension, lest it might be incipient septic infection; but by the 2nd of March, or a week afterwards, it had subsided under treatment, and there was steady improvement in all the symptoms until final recovery.

Up to the time when this patient resumed his business, the case embraced a period of eight weeks.

Owing to the acknowledged difficulty of this subject, and the conjecture and doubt by which it is encompassed, it will be observed that I have not hitherto attempted to locate this trouble, but my belief is that it was either in the lower portion of the ileum, or at the ileo-cæcal junction.

I sent the pathological specimen to Dr. Robt. Wilson, of Charleston, S. C., for microscopic examination, and he made the following report:

It is composed of two layers—

1. Mucous, containing bundles of new formed tissue (connective), arranged irregularly throughout the layer. The normal structure of this layer has been almost wholly obliterated by the long-continued inflammatory process, the

only traces of which I am able to detect being a few remains of the crypts of Lieberkühn.

2. Connective tissue. This is present in the form of rather a broad band, the fibres of which lie, for the most part, parallel to each other in straight or wavy bundles. No trace of muscular tissue can be found.

I therefore conclude that the specimen is a slough of the small intestine comprising the two internal layers only—viz., the mucous and the sub-mucous.

Probable Interstitial Pregnancy Simulating Abdominal Pregnancy—Laparotomy—Failure to Determine—Barnes' Bag Used—Labor—Recovery.*

By I. S. STONE, M. D., of Washington, D. C.

Mrs. —, white, aged 26 years, of good physique, and without previous ill health, was delivered of her second and last child in 1890. She sustained a laceration of her cervix uteri which gave rise to certain symptoms of uterine disease, such as endometritis, menorrhagia, &c.

While in this condition, and hoping to be cured of the disease, she submitted to a curetting of her uterus, and an attempt was made to close the tear in the cervix. She had ceased to menstruate before this operation was performed, but owing to her irregular hæmorrhages but little attention was paid to it, until she was found to be pregnant without doubt. She had no very unusual symptoms until in the fifth month of her pregnancy. She engaged the able services of Dr. Ralph Walsh, who saw her occasionally in November, 1892. Her uterus appeared of about the usual size and position commonly seen at that period of gestation.

During one of her visits to the doctor's office, he discovered what appeared to be a remarkable change in the position of the child. There was also a rise of temperature, quick pulse, and every appearance of important and pressing change in the condition of the patient. The writer was asked to see the patient in consultation, and found no reason to doubt the presence of an abdominal pregnancy. The position of the child could be distinctly and easily ascertained. It appeared to move quite freely in the abdomen. and distinct motions of the foetal extremities could be seen

*Read at a meeting of the Medical and Surgical Society of the District of Columbia, held May 8th, 1893.

and felt by physician and patient nearly reaching the diaphragm.

The temperature had by this time—notwithstanding quinine and other antipyretics were freely used—reached 103° in the evening. The pulse was 130. On the occasion of a second consultation, two days after the first, the patient discharged from the bowel fully a pint of blood, and this was repeated in a few hours, but in much less quantity. A sound was inserted in the uterus at this time, to four and one-half inches, without breaking membranes or apparently reaching them. The finger was pretty well inserted beyond the internal os without touching any portion of the fœtus or membranes. The next day (Sunday) the temperature reached 105° ; pulse 140, or even above this.

The case now assumed a very serious aspect, and as the patient, a very sensible lady indeed, was quite willing to submit to any measures intended for her welfare, she was taken to the hospital for exploratory operation. She was confident, as was her husband, that the child was free in the abdominal cavity. They both noticed the change, and, if I remember aright, called their physician's attention to it, without comprehending what might be involved.

On the next day—Monday—the abdomen was opened in the median line, two inches, and a careful search for lesions or disease failed to discover the cause of the very unusual symptoms. The fœtus appeared to be in a sac whose thickness was not more than one-eighth of an inch, and which appeared to nearly fill the entire abdomen. The appearance of the sac suggested uterine tissue, although it was indeed pale and very flaccid. In an effort to ascertain the location of the child, I introduced the right index finger into the os uteri and with the left within the abdomen, explored the uterus fully two and a half inches without finding an explanation of the case, save to say that it probably was a case of interstitial pregnancy, which I am even now inclined to think correct.

As no cause for the pyrexia could be ascertained, the abdomen was closed. The patient at once commenced to improve. The chart will show that a continued improvement followed upon this exploratory operation. Her pulse, which under ether anæsthesia reached 190, was soon back to 120, and down on the seventh day to 100.

Two weeks after this it was thought best to further explore the uterus by dilatation and remove the fœtus. The patient was, by this time, anxious to be relieved of further danger

if possible, and as there was danger until the foetus was removed, the os was dilated by Barnes' bags and by means of pressure from above, the sac was reached and finally the foetus and membranes extracted.

Ergot and other stimulants to uterine contraction were liberally used before this operation, and although there was free hæmorrhage when the placenta came away, the patient recovered nicely. I need not say that I confess to a feeling of disappointment in not finding the child partially if not entirely free in the abdominal cavity.

The exploratory incision I still think was justifiable, although it revealed the mistake I had made in diagnosis. That the case was unusual needs no explanation. It was the first one of the kind in the experience of the two physicians who have seen a total of fifty years experience in active obstetrical practice.

These cases are, perhaps, more frequent than appear on the surface in the journals or text-books. Mr. Lawson Tait quotes Parry, page 103, who mentions a similar case and cites it as a possible source of error. Mr. Tait says he has seen eight cases and has notes of five of these. He considers such cases of great interest, and says they are a source of difficulty and danger, and have not received the attention they deserve.—*Dis. Women*, p. 498, Vol. I.

Finally, I would say that the curetting—which was done by one of the most prominent gynecologists in the Northwest—failed to dislodge the ovum, if it was in the uterine cavity at that time, several weeks after impregnation must have occurred. This, with the other circumstances of the case; which it is difficult to relate as they were impressed upon my mind at the time, go to show at least an exceptional case, and whether the pregnancy was interstitial or not, it certainly was not abdominal, although appearances favored this view of the case.

The high temperature, quick pulse, and intestinal hæmorrhage, quite naturally led me to urge an exploratory incision, which proved the peritoneum quite free from injury or infection.

1504 H Street, N. W.

Case of Remarkable Patency of the Glottis.

By **ANDREW H. SMITH, M. D.,** of New York,

PROFESSOR CLINICAL MEDICINE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

Dr. G., of Connecticut, called upon me in May, 1893, in regard to a catarrh of the stomach from which he was suffering. He stated that repeated attempts had been made to use the stomach tube, and that it passed readily for a distance of about twelve inches, when it was abruptly arrested, and the slightest force used to overcome the obstruction provoked excessive coughing and strangling, necessitating the removal of the tube.

In my hands, the attempt to reach the stomach was no more successful. There was no obstruction whatever until the end of the tube had reached a point opposite to the junction of the upper with the middle third of the sternum, where its advance was abruptly checked. No discomfort was felt so long as the tube was allowed to remain at that point, but when a gentle attempt was made to overcome the obstruction, a violent spasm of coughing was excited, and the tube was thrown out. A second attempt was made with the same result, but this time I noticed that air passed through the tube with inspiration and expiration, and when the tube was compressed, respiration was arrested. This left no doubt that the instrument had passed into the trachea, and was arrested at the bifurcation.

At the next attempt, the patient was directed to emit a high note as the point of the tube passed into the pharynx. This plan was immediately successful, the extremity passing readily over the closed glottis, and the tube reaching the stomach without the slightest difficulty. From this time on, lavage was practised with perfect ease, and with very satisfactory results.

It is remarkable that a stomach tube of full calibre should pass so readily between the vocal cords, taking this course at every attempt, instead of the apparently much easier route, into the œsophagus. A careful examination by palpation, and with the laryngoscope, afforded no explanation. The function of the vocal cords was performed normally, showing the absence of paresis.

The extreme tolerance of the larynx and trachea to the presence of a foreign body is also worthy of note.

Case of Fracture of the Humerus Requiring Resection for Reduction.

By J. WILTON HOPE, M. D., of Poquoson, York County, Va.

During the month of July, 1891, I was hurriedly summoned by my friend, Dr. P., to assist in a case of compound fracture of the humerus, and requested to bring instruments and other necessities for an operation. On arriving, we proceeded to investigate the extent of the injury our patient had received. He was a boy 16 years of age, who, on the night previous, during a fit of somnambulism, had jumped out of the second story window of the house. As a result of the examination, we found a compound fracture of the humerus of the left arm at the surgical neck, the lower portion of the bone protruding three inches, coming out on the anterior aspect of the arm near its axillary border lacerating the deltoid muscle at its inner margin. The points of insertion of the teres major, and a portion of the latissimus dorsi and pectoralis major muscles, were torn away, and their sites marked by a few torn fibres. The axillary and brachial arteries were intact, and there was no great amount of hæmorrhage from their branches.

The patient, as a matter of course, had experienced considerable shock, but the heart's action and respiration were fairly good, though the intellect remained clouded for several days, the result of more or less cerebral concussion, and the latter fact aided, in no small degree, in the treatment.

After discussing the matter, we decided to attempt reduction; failing in this, we were to resort to resection.

On attempting reduction, we were unable to retain the parts in a correct position.

This may sound rather queer, but the fractured points were such as will be produced by transversely breaking a rattan stick; that is, the spiculæ protruding from each fractured surface really increased the length of the bone when fracture was reduced at least three-fourths of an inch, and thus altered the relation of the fleshy parts, and produced a gaping of the wound. So the following plan was decided on:

I resected three-fourths of an inch of the lower fragment, and reduced the fracture, washed out the wound with a 1 to 2000 sol. of mercuric chloride, and placed a small compress in the axilla, covered wound with a compress of absorbent

cotton that was kept saturated in the solution, and, with a wide roller bandage, secured the arm firmly to the trunk, and kept patient in a recumbent position.

As drainage by gravitation was perfect, the wound was gently washed out every morning, after suppuration began, with a sol. of carbolic acid, 1 to 80, to stimulate rapid cell proliferation.

The ends of the bone united rapidly, and, in six weeks, patient was able to move about without inconvenience.

At the end of two months, a small spicula of bone worked out, and the wound healed, and four months from date of injury the patient could row a boat, chop wood, and plow.

My reason for not including more of the bone in the resection was justified by result; had I excised a sufficient amount to have left a considerable space between the ends of bone, no union could have taken place.

Had ankylosis of the shoulder-joint occurred, the amount resected would have been sufficient to avoid its consequences.

There was perfect union, as much so as if it had been a simple fracture of the middle third of the bone, and the patient has the proud distinction of carrying a portion of the bone of a useful arm around in his pocket.

The complete success is due to the constant attention of Dr. R. E. Power, who conducted the after-treatment.

Sugar-Coated Pills.

The sugar-coated pills of Messrs. Warner & Co., which have received a prize medal at all the great International Exhibitions, have a high reputation in Great Britain. Their Sugar-Coated Phosphorus Pills have especially high endorsements for their solubility, the perfection of their coating, and for their thorough composition and accurate sub-division, the element being thoroughly diffused and perfectly protected from oxidation. These phosphorus pills are presented in numerous combinations of a useful character, including a variety of the leading tonics, stimulants and sedatives.—*London Medical Record.*

Correspondence.

Uselessness of Drainage in Abdominal Section for Tubal Disease, etc —Reply to Criticism.

Mr. Editor:—In the "*Medical and Surgical Reporter*" for June 24, 1893, the unusual honor is extended me of making my article on "Drainage" (as published in June No., 1893, of the *Va. Medical Monthly*) the subject of an editorial. The editorial is an odd jumble of personalities and brusque expressions—a form of writing which is becoming very common, and which, with some, passes for irresistible and conclusive argument. Inasmuch as the interests of science are not subserved—rather injured—by undignified controversy, I disdain to meet *Anonymus* on the ground he takes. He leaves unshaken my propositions that: Preliminary curettage of the septic uterus is an important factor in producing a clean field for a subsequent coeliotomy; that by means of Trendelenburg's posture, the hand may work under the guidance of the eye, and thereby the points of union between pus-sacs and the pelvic contents may be so accurately severed as to produce the least bleeding; that if pus is evacuated, it is more effectually removed by absorbent gauze than by flushing; that lesions of the viscera are less apt to be made when we *see* what we are doing; that blood and serum produced by these raw surfaces are not only innocuous, but that the latter is powerfully antiseptic, if undiluted by water; that even plain sterile water causes exfoliation of the endothelium, and is, therefore, actively irritant to the peritoneum; that the drainage-tube, by producing a break in the line of primary union, must conduce to hernia; that the peritoneum, within a few hours, surrounds the tube with lymph, which immediately produces adhesions, and remotely false bands; that the convalescence of drainage-tube cases is prone to be febrile, while undrained are afebrile; and that the drainage-tube is sure to become septic unless antiseptics be used to prevent it. I specified the classes of cases requiring drainage.

My anonymous antagonist has failed utterly to disprove my statements. He adds a novel argument for the use of the drainage-tube: "Greater security against hæmorrhage." I would suggest to *Anonymus* that he operate in the Trendelenburg position, so that he may avoid producing immediate hæmorrhage, and that he may see how he is tying his ligatures against secondary bleeding. The advocacy of the tube for security against hæmorrhage is a confession of poor surgery.

"*Anonymus*" states very plainly that "no one but a bungling surgeon will put infection into the belly either before or after an operation." His drainage-tubes do not become infected, so he says. His irrigating fluid is not irritating, according to him. For the sake of argument, I will grant that flushing out the belly removes all the sepsis escaping from the foci; surely my method does. Therefore, I am utterly at a loss to know why *Anonymus* drains at all. If infection does not occur at the time of operation, does it occur afterwards? Why does he drain? Dr. Noble's figures may be relied upon as those of a conscientious worker. He is a drainage man, and thoroughly clean in his work; yet, nearly half his drained cases were febrile, while less than a fifth of the undrained were.

Dr. Charles P. Noble presented the following table before the Philadelphia County Medical Society, February 22nd, 1893: 29 drained and febrile.

36 drained and afebrile.

6 not drained and febrile.

26 not drained and afebrile.

3 not stated.

100 cases.

One word about general statements. I have before me a reprint from the *Amer. Jour. Obstet.*, etc., for 1889. In it Dr. B. Curtis Miller reports 144 successful laparotomies. He does not enter very largely into the details of his cases, and we cannot tell which were drained and which were not; but I wish to call *Anonymus'* attention to the fact that while

looking for "leaders in abdominal work," he has entirely ignored the claims of Dr. Miller to recognition. His statements have never been proven incorrect, and until some one can make more comprehensive statements, Dr. Miller should certainly stand as a leader.

What right, sir, has *Anonymus* to attempt to place Philadelphia in a position hostile to New York? Does he represent the best thought of Philadelphia? I think not. Is not Baer the peer of any in America, and does *he* drain? Surely, Philadelphia does not need a defender for its science. Noble, Baldy, Hirst, Baer, Montgomery, we may claim as our friendliest of rivals. If *Anonymus* will seek the work of these men, if he will go over that of Howard Kelly's clinic on infection of the drainage-tube and on drainage, if he will study that of Buchner on the blood serum, Winckel, Leopold, Ballance, and Edmunds, on the fate of the clot; Marcel and Delbet on the tolerance of endothelium; if he will, in short, apply to his specialty the precious truths scattered here and there over a broad field, he will, by stages, be brought to the consciousness that the reparative forces of nature must be utilized—not antagonized—by our surgery; he will strive, as all of us are doing, to so perfect his work that it will be a finished work, with the best results and the fewest sequellæ. Hasty reading, while laboring under great emotion, has forced him into inaccurate interpretation of Buchner's work, as summarized in my article. His discourtesy in argument, his failure to refute scientifically a single point raised in my original paper, will convince our audience still more than can my humble effort, that "the report of even innumerable operations with a low rate of mortality, if irrigation and drainage have been employed in the simple cases, and vaginal tapping in the more acute and difficult, is the report of poor work, incomplete work, work with a great deal left behind in the way of possible hernia and inevitable false bands. The larger the number of such operations reported, the more damning is the argument against the method under which these women have suffered, for the convalescence of drainage-tube cases is usually feb-

rile, showing that infection has occurred. The adhesions are a constant cause of irregular intestinal action, and render the patient liable to intestinal obstruction, while the ventral hernia must be cured by a second cœliotomy."

Very truly yours,

WM. R. PRYOR, M. D.

15 Park Avenue, N. Y., July 11, 1893.

Proceedings of Societies, Boards, etc.

MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.

Meeting of May 8th, 1893.

Dr. Isaac S. Stone read a report of a case of

Probable Interstitial Pregnancy Simulating Abdominal Pregnancy, etc.—A Mistake in Diagnosis, and What Came of It.
See page 470.

DISCUSSION.—Dr. Joseph Taber Johnson considered the paper very inspiring, and Dr. Stone's free confession leaves us no room for criticism. These errors in diagnosis are very instructive; they teach us stronger lessons than we could learn in any other way. He thinks many physicians are too careless in announcing opinions. He recounted a case where various opinions had been given of a fibroid enlargement of the uterus; some in this case had diagnosed ovarian tumor, others fibroid tumor, and others had pronounced the malignant character of the affection, urging an immediate operation. All of these men were celebrated in their special line of work. The lesson we are to learn from Dr. Stone's case is the more carefully to devote ourselves to diagnosis. He was surprised, when looking up the subject some time ago, to learn the number of cases where the abdomen had been opened upon a mistaken diagnosis. He did not see, in Dr. Stone's case, why a correct diagnosis could not have been made before, as well as after, the abdominal section.

Dr. J. Foster Scott said that he fully realized the difficulty, in some cases, of diagnosing a pregnancy from other uterine enlargements, but he thought the mistake would

have been avoided had Dr. Stone made a careful examination under anæsthesia, as should be done in all doubtful cases.

Dr. W. P. Carr thought the foetus could be so easily felt through the abdominal walls that the diagnosis of pregnancy might have been made.

Dr. Stone, in closing, said: We often learn more from a mistake, as in the present instance, than from many successful cases. He believed in exploratory laparotomy when in doubt about diagnosis. He wished to thank those who had discussed his paper for their fair treatment, but wished them to bear in mind the alarming symptoms, such as high temperature, hæmorrhage from the bowel, and that the uterus appeared empty, as far as could be ascertained. He now believed the high temperature, in this case, to have been due to a neurosis, and not to sepsis, as was suspected.

Dr. J. Wesley Bovée read a paper on

Laparotomy for Puerperal Sepsis. See page 428.

DISCUSSION.—Dr. Joseph Taber Johnson said that he has not had much experience in operating in cases of puerperal sepsis. He did not think the operation held out as much hope for the patient's recovery as Dr. Bovée would lead us to believe. When medication and intra-uterine irrigations fail to effect any good, it is rather a sad task to propose an operation; it is very hard to obtain the consent of the family and the patient to allow such a course.

Dr. Maury, of Tennessee, found nearly all the patients who were operated on died, because, after the general absorption of the poison, the operation had been done too late. If we could make a successful diagnosis of the localization of the pus, in the tubes or elsewhere, laparotomy would offer great advantages, but where the distribution of pus becomes general, there is but little hope of a successful termination.

Dr. J. T. Kelley said that he had seen one of Dr. Bovée's cases. He agrees with Dr. Johnson. Where the condition is puerperal septicaemia, generally there is little hope of benefit following an operation. He recalled a case in which albumen and pus in the urine attended puerperal sepsis, the temperature reaching 107° Fahr. The *post-mortem* showed no pus in the pelvis, but the kidneys were riddled with abscesses. He thinks it just as wise to operate on a pelvic abscess during puerperal septicaemia as to operate on a pelvic abscess with a high temperature in diphtheria or measles. Another case—sepsis had followed a slight tear

of the perineum; masses were discovered on both sides of the uterus, and persisted for several months after confinement. This case was treated constitutionally and locally, and finally recovered.

Dr. I. S. Stone said that we are led by prominent men, especially Mr. Tait and his followers, to operate whenever we find pus. He agrees with this in the main, but if we would be successful, there must be great care exercised. When pus is localized, as in pyosalpinx or tubo-ovarian abscess, it is generally safe practice to operate at once and remove the source of infection; but if we operate even in these cases during an attack of peritonitis, we should not expect the mortality to be as low as when the peritonitis had subsided. Moreover, in cases of pelvic abscess we often find the patient so ill, from long-continued suppuration, that to open the abdomen is to invite disaster. The administration of an anæsthetic is perilous in itself. He has had experience in many of these cases, although not quite as soon after delivery as those mentioned by Dr. Bovée, and he had found one of the most difficult lessons to learn was "when not to operate."

Dr. W. P. Carr thought these cases should be called pyæmia, and not septicæmia, because the pus accumulation is local, and germs have not gotten into the circulation. Does not think that an operation will do good where the uterus is infiltrated with pus. All the cases he has seen, of this infiltrating character, were too serious for operation; still, he advises an exploratory laparotomy to determine the true state of affairs.

Dr. J. F. Scott said that he agreed with Dr. Kelley, that the organs and tissues, remote from the uterus, were usually invaded by the septic infection. The septicæmia often develops into a true pyæmia. He had seen cases, *post-mortem*, such as Dr. Bovée describes, in which the uterus was permeated with pus channels, and he thought that the uterus was always the primary source of infection and the organ principally affected. If any operation at all were justifiable, he urged a complete hysterectomy. He thought that the question, whether to operate or not, could usually be decided between the tenth day and the third week of the puerperium.

Dr. L. Eliot said: One of the cases to which Dr. Bovée had made reference was one in which he had been called in consultation, and had urged operation; a difference of opinion had arisen, and Dr. Bovée had been called in. The

perineum had been lacerated, the laceration extending into the bowel, and the abdomen was filled with pus. An operation was finally refused, and the woman died the next day, ten days after delivery. In this case, intra-uterine irrigations had not effected any good result. He believed operation indicated, after the failure of irrigations in cases where the septic infection had not become general.

Dr. J. A. Bovée said, in closing: He was sorry the gentlemen present had not remembered that in his paper the operations suggested were only applicable to local conditions, and not where general infection was present. If the poison has passed into the blood-circulation, we were powerless to counteract it. That was why he had doubt as to the necessity for early surgery. The high temperature will be present in some of these cases, especially in classes one and two, and was an indication, rather than a contra-indication for operation. If we wait for the temperature to drop, we will have, by that time, general infection. The case related by Dr. Kelley clearly died of kidney disease, which may or may not have been septic by extension *via* the bladder; but how could Dr. Kelley say the patient died of septicæmia? Surely he had not given us a trace of such history. Pus often accumulated in the broad ligament, and burrowed into the vagina, rectum, or other part; and recovery ensuing, this should be evidence that the case was not hopeless, because pus was in that position. In the case operated on by him that recovered, the temperature reached 106° Fahr.

Analyses, Selections, etc.

Treatment of Vaginismus Due to Large Frænum.

Dr. B. E. Hadra, of Galveston, read a short paper before the recent session of the Texas State Medical Association, entitled "Contribution to the Pathology of the Fourchette." He related a case where a young couple had a very hard time in their sexual relationship, owing to an excessively large frænum that made the insertion of the male member very difficult and painful, and led to almost a full vaginismus. The true condition was found out only when her child was born. The fourchette had then to suffer a thorough rent. Afterwards, everything became perfectly satis-

factory. Induced by this experience, Dr. H. paid close attention to the condition and form of the frænum, found it of very different size in the examined females, and came to the conclusion that many cases of dispareunia, and even full-fledged vaginismus, may be caused by such megalofræna, as they are liable to be irritated and fissured by cohabitation. They then become, in pathological respects, as troublesome as rectal rents, causing all kinds of nervous reflex suffering, etc. He thinks that the most sensible way to treat them is simple discission.

Urethral Reflex Irritation in the Female Due to Non-Irritable Rectal Ulcer.

G. W. Grove, M. D., of Dallas, Texas, read a paper before the North Texas Medical Association, June, 1893, which is worthy of reproduction. Dr. Grove said he had met with a class of cases suffering from a urethral disorder that presented itself as peculiar, and peculiar for the reason that the most marked subjective symptom was urethral disturbance, and that frequently this trouble was the only symptom that induced the patient to apply for medical relief. He described the etiological factors in this reflex trouble as acute cervicitis, endometritis, renal pathological conditions, affecting primarily the bladder and rectal lesions, such as internal hæmorrhoids, rectal stricture, rectal fissure, and rectal ulcer. Of these factors he considered the endometritis and the non irritable rectal ulcer as coming within the scope of his paper. The *irritable* rectal lesions usually directed the attention of both patient and physician to the source of the disturbance. While the secretions from the vaginal canal might sometimes set up urethral trouble, no doubt there are cases where this swollen and tender urethra is a result of endometritis lit up through the reflexes. The pathological condition is manifest in a swollen urethra; a meatus, pouting and tender; the canal sensitive to pressure and exploration. The symptoms were described by the history of several cases.

A woman, the mother of several children, applied for relief from urethral trouble, which she described as "pain at the neck of the bladder, enough to drive one crazy." She suffered from frequent and painful micturition; urine about normal, as to quantity and quality. Sometimes, the urine might be considerably diminished in quantity; patient said she suffered from constipation; urethral greatly swollen and tender. Rectal examination revealed ulceration of ante-

rior and posterior rectal walls. When the ulcers disappeared under treatment, the urethral trouble subsided.

He cited a number of cases in the female, and three cases in the male, where the only etiological factors that could be found were the ulcers in the rectum. He emphasized the fact that these ulcers were non-irritable; and the attention of the patient had never been attracted to the rectal condition. He thought the caption of his paper would express more correctly the nature of its matter by wording it *urethral reflex irritation as a result of non-irritable rectal ulcer*. In all these cases, in both sexes, the urethral hyperæmia and complaint disappeared with the treatment of these non-irritable ulcers.

The authors have pretty well covered the ground of the *irritable* rectal ulcer, but the reflex conditions arising from the non-irritable ulcer of the rectum afforded a new field for clinical observation.

He described a case of "nervousness and painful micturition, with indigestion," that revealed on the rectal walls several ulcers of a non-irritable character. The patient began to improve at once by treating the ulcers. He thought many of the obscure cases of this urethral trouble, if they could be examined, would reveal what is denominated "non-irritable ulcers" of the rectum as the only cause.

Dr. Thomson spoke highly of the paper, and said he had found just such cases as had been described; and that he believed he had treated many of these cases with quinine, thinking that the urethral trouble was due to malaria. Two of the cases cited in Dr. Grove's paper had arisen in his own practice, and Dr. Grove reported them by permission, with due credit.

Drs. Armstrong, Fort, Williams, King, Wilson and others, spoke as to the merits of the paper, saying they believed the field suggested for investigation by Dr. Grove's paper would prove profitable in examination.

Dr. Armstrong said, further, that he considered the paper the most valuable one read before the Association, and that he hoped the members would give close attention to the line of clinical investigation suggested.

Formic Aldehyde as an Antiseptic.

George Foy, F. R. C. S., Surgeon to the Whitworth Hospital, and formerly Lecturer Anatomy and Forensic Medicine in the Carmichael School of Medicine, etc., Dublin, Ireland, says (*Med. Press and Circul.*, July 5,) that formic alde-

hyde, HCOH , may be regarded as the aldehyde and ketone of formic acid. Hofman, in 1867, succeeded in producing the chemical by passing the vapor of methyl alcohol, together with air, over ignited platinum. It is a clear mobile liquid readily miscible with water in all proportions. For a long time it was regarded as little more than a chemical curiosity, but within a few years past its remarkable antiseptic properties were the subject of numerous experiments. Applied to the skin, it is non-irritating and non-poisonous. The vapor of the undiluted aldehyde absorbs oxygen from the air and produces the irritating fumes of formic acid.

Being non-poisonous, producing no stain, and being in solution free from unpleasant odor and vapor, it possesses distinct advantages as an antiseptic dressing. Its use in ophthalmic surgery is strongly recommended by M. Valude (*L'Union Medicale* Notes), who, in an exhaustive article on the substance, tells of its good effects as a collyrium in purulent ophthalmia, and as a dressing after ophthalmic operations. He supports the opinion of Trillat (*Bull. de l'Acad. des. Sc.*, 1892,) as to its superiority to corrosive sublimate as a germicide and a prophylactic; views which are also held by M. Berlioz (*Moniteur Scient.*) and M. Duclaux (*Annales de l'Institut Pasteur*).

A small glass of formic aldehyde, placed close to raw meat, preserved it quite fresh and sweet for weeks by its vapor. Sixteen milligrammes of the aldehyde had the same power in destroying bacilli as forty milligrammes of corrosive sublimate. It has the further advantage over the corrosive sublimate solution of not coagulating albumen, consequently freshly-cut surfaces, washed with the solution of the formic aldehyde, when brought together, have no intervening layer of coagulated tissue. Raw surfaces are brought together in an almost normal state. Gynæcological operations, in which the aldehyde is used as an antiseptic, are free of the risk of poisoning, which is too often an accompaniment to the use of solution of corrosive sublimate as is shown by Senor Vicente Peset Cervera (*El Siglo Medico*, 4th June, 1893,) of Valencia.

Formic aldehyde closely resembles formic acid in its antiseptic properties—properties which the acid was recognized to possess by John Ray (*a*) in 1609. It was not, however, until 1887, two hundred years afterwards, that this property was availed of in medical practice. From numerous ex-

(a) *Phil. Trans.* January, 1670.

periments carried out many years prior to 1887, Dr. Voitoff (b), of Moscow, drew the following conclusions:

(1) Formic acid inhibits the development of the putrefactive microbes as well as destroys existing ones.

(2) Formic acid is a more powerful germicide than carbolic acid.

(3) Formic acid is a specific disinfectant and germicide, since, while destroying the culture, it alters but little the nutritive medium.

(4) Being volatile, formic acid disinfects the air.

From this report, the staff of the Golitzynsky Lying-in Hospital, Moscow, decided to substitute a solution of formic acid for the nitrate of silver solution they were using as a prophylactic against ophthalmia neonatorum (c). Since its introduction, no case of the disease was met with.

Pichi—Some Uses and Formulæ.

Messrs. Parke, Davis & Co., of Detroit, introduced the virtues of pichi (*fabriana imbricata*) to the attention of the American profession a few years ago. Few of the newer remedies have met with more approval because of its special value in vesical and genito-urinary troubles. It is diuretic, tonic, terebinthinate, quickly modifies urinary secretions in uric acid diathesis, thus calming vesical irritability, and favoring the washing out of gravel. In short, it favorably induces purulent discharges, and acts as a general stimulant of the excretory functions. The dose of the fluid extract ranges from 10 to 30 minims—repeated three or four times daily. A most useful formula is—

Ry.—Fl. ext. pichi
 Fl. ext. hydrangea.....āā ʒj.
 Fl. ext. hyoscyam.....ʒij.
 Syrup.....ʒij. Mix.

S.—Teaspoonful three times daily and at bed-time.

The fluid extract combines nicely with liq. potas., tinct. nux vomica, elix. calisaya, glycerin, potas. nitras, etc. Messrs. P., D. & Co. will forward therapeutics notes on application.

(b) *London Medical Record*, 1887.

(c) *London Medical Record*, 1887, p. 310.

Book Notices.

Lessons in Physical Diagnosis. By ALFRED L. LOOMIS, M. D., LL. D., Professor of the Practice of Medicine and Pathology in the University of the City of New York. Tenth Edition. Revised and Enlarged. Octavo. Illustrations, some in color. 240 pages, extra muslin, price, \$3.00. New York: William Wood & Company.

The successive editions of this standard book mark the advances made, since the first edition, in the science of physical diagnosis. In keeping with advances made, the sections on "Physiological Action of the Heart" and an "Examination of the Urine," as they appeared in former editions, have been entirely re-written; while a new chapter on "Clinical Microscopy," has been added. Seventy-eight pages are devoted to the *physical* diagnosis of lung diseases; 50 to diseases of the heart and thoracic aorta; and 41 pages to abdominal diseases; over 28 pages are given to diagnosis by examination of the urina, and over 30 to Clinical Microscopy. A chapter of about 35 pages, well illustrated, on "Mechanical Aids to Diagnosis" completes the work, which is the one very properly adopted by many of the colleges, etc.

Editorial.

Medical Society of Virginia.

The Preliminary Announcement of the Twenty-Fourth Annual Session of this Society, to be held October 3rd, 4th, and 5th, and possibly 6th, 1893, in Charlottesville, Va., has just been issued. Under the influence and untiring energy of the President, Dr. Herbert M. Nash, of Norfolk, Va., every indication is that the meeting will be largely attended, and that the papers presented will be of the highest order. Under the leadership of the Chairman of Committee of Arrangements, Dr. E. M. Magruder, the profession in and about Charlottesville—including that of the University of Virginia of course—is thoroughly interested in the grand success of the meeting, and plans are already being perfected for scientific treats. It is the special wish that all distinguished Virginia doctors residing in other States at this time shall be in attendance, and, as usual, many others of the eminent in this country may be expected. With Dr. R. M. Slaughter, of the Theological Seminary, Va., as leader, it may be confidently asserted that the subject of *Chronic Nephritis*—se-

lected for general discussion—will be thoroughly considered. A matter of special interest will be the awarding of the two prizes of One Hundred Dollars each. The *Dr. Hunter McGuire Prize* of \$100 is open to members of either of the State Medical Societies of Virginia, North Carolina, or West Virginia, and will be awarded for the best Essay deemed worthy of a prize on *Obstruction to the Function of Micturition*. The *Dr. Joseph Price Prize* of \$100 is open to competition only by members of the Society—the subject being *The History of Surgery and of Surgeons of Virginia*. For details, etc., see advertising page 71 in this issue.

Messrs. Parke, Davis & Co.

It is due this firm that special attention should be called to their advertisement (page 5), explaining their relation to the publication about "Animal Extracts," and their "Apology" to the profession for the association of their name with its manufacture. We were not aware that the discoverer of the virtues of these "Animal Extracts," or their authorized manufacturers, had protected the formulæ by patent or copyright. Under all the circumstances, we trust no further legal proceedings will follow, which can only develop parties in the profession without benefit to either.

Dr. J. C. Culbertson,

Until June 30th, 1893, Editor of the *Journal of the American Medical Association*, has returned to Cincinnati, and will resume Editorial charge of the *Lancet-Clinic*. Dr. John B. Hamilton, formerly Surgeon-General of U. S. Marine Hospital Service, succeeds Dr. Culbertson as Editor of the *Association Journal*. If each fulfills his part as well as the other, then both will prove successes. Dr. Culbertson was a good, faithful worker for the *Journal*, and for the American Medical Association.

The Eleventh International Medical Congress

Will convene in Rome September 24th. The Pan-American Congress Excursion will start from New York September 9th, on the steamship "Werra," and arrive in Genoa September 20th—four days in advance of the opening of the Session in Rome. Round-trip tickets for inside rooms, \$142; for outside rooms, \$150 and upwards. Further information of all proposing to join the Pan-American Congress Excursion can be had from Dr. Charles A. L. Reed, Cincinnati.

Medical Examining Board of Virginia.

The Second Semi-Annual Examination for 1893 of applicants for license to practice medicine, etc., in Virginia, will be held in the Hall of the House of Delegates, Richmond, Va., September 20, 21, and 22. The examinations will be conducted in the same manner as those held last April. For details, we refer to advertising page 72. Inquiries addressed to the Secretary, Dr. Benj. Harrison, Richmond, Va., will receive prompt attention.

We regret very much that after the Fall Session of the Board at Charlottesville, October 3rd, the Board will lose three of its most prominent members by resignation—although we are assured of their most earnest friendship and co-operation. The President, Dr. Hugh M. Taylor, and Drs. Jacob Michaux and Paulus A. Irving, who have served terms as Secretary of the Board—each of them of Richmond—have accepted Professorships in the College of Physicians and Surgeons, Richmond, Va., which is to begin its Session October 3rd, 1893. According to the principle long ago established in this State with reference to the distinct separation of the educational and the licensing powers, no teacher in any diploma granting institution can be a member of the Medical Examining Board of Virginia. These resignations will leave vacancies to be filled by the Medical Society of Virginia during its Session in Charlottesville. It is sincerely to be hoped that whoever may succeed these gentlemen—especially the President—will devote to the interests of the Board the same untiring zeal and painstaking discretion that has characterized the relationship of each of the gentlemen named.

A Treatise on Wine of Cod-Liver Oil with Peptonate of Iron

Is a pamphlet containing some of the most recent researches (including microscopical drawings of the active principles obtained from cod-liver oil), and clinical reports of cases treated in hospitals and private practice with this preparation. It certainly appears that this peptonate of iron is a most excellent adjuvant to the oil, and that it has in itself many advantages over other forms of iron. A copy of the pamphlet will be mailed complimentally by Messrs. Frederick Stearns & Co., of Detroit, Mich., to any physician sending the firm his address.

Pan-American Medical Congress.

The Committee of Arrangements for the Session to be held in Washington, D. C., September 5th, 6th, 7th and 8th, 1893, has about completed its arrangements for the comfort of visitors and the success of the Session. The Chairman of the Committee is Dr. Samuel S. Adams; Secretary, Dr. J. R. Wellington; Treasurer, Dr. G. L. Magruder; Chairman of Reception Committee, Dr. Samuel C. Busey; of Entertainment Committee, Dr. G. Wythe Cook; of Registration, Dr. Carl H. A. Kleinschmidt; of Railroads, Dr. H. L. E. Johnson; of Printing, Dr. Llewellyn Eliot; of Halls and Exhibits, Dr. H. H. Barker; of Ways and Means, Dr. C. W. Richardson; of Information, Dr. W. Sinclair Bowen; and of Hotels, Dr. George S. Ober. Most of the Governments—especially of North and South America—have appointed delegates in response to the invitation by the President of the United States. Delegates have also been appointed by most of the Governors of most of the United States; and nearly all the larger cities of the country, as well as the United States Government itself, have appointed delegates. So that there can be no doubt of the success of the Congress. Many valuable papers, from men eminent in the medical world, have been promised. It must be conceded that whatever of success attends the Session of the Pan-American Medical Congress next month should be attributed, in major part, to the untiring energy and well-directed efforts of the Secretary-General, Dr. Charles A. L. Read, of Cincinnati, Ohio. Dr. Wm. Pepper, of Philadelphia, Pa., is President.

Tri-State Medical Society of Alabama, Georgia and Tennessee.

The Fifth Annual Session of this well-officered, popular and useful Society, will be held in Chattanooga, Tenn., October 17th, 18th, and 19th, 1893. A number of papers are already promised, and the prospects of an excellent meeting are good. Any proposing to present a paper should at once notify the Secretary, Dr. Frank Trester Smith, of Chattanooga, Tenn., giving title, etc., so that it may be noted in the Circular, to be issued early in September. The membership is not confined to the three States named in the title; so that any reputable doctor in any State can become a member, by applying to the Secretary, enclosing the dues \$2 for one year. Dr. W. E. B. Davis, of Birmingham, Ala., is President, and his name is a tower of strength for such a trust.

Medical Benevolent Associations.

When one sees on every hand the good accomplished by benevolent associations, in connection with Orders of every kind, ministerial organizations, etc., it is surprising that Medical Societies have not also adopted this practical feature. There may be some physicians whose circumstances do not lead them to care for such a matter, or perhaps a few others have provided for the future by as much insurance as their means will allow. But neither suggestion applies to the vast majority of doctors, who, while life and health continue, are able to provide a sufficient support for their families, yet who, if stricken down by disease or death, would leave families without means of support. Let any one run back only a few years over the death-list of his professional acquaintances, and he will find proof of the common fact that not until death had removed the doctors were their families in needy circumstances, but then they became poor indeed. To provide against such distress, and to lessen the degree of dependence of those left behind, beneficial features or organizations within State Medical Societies can do much, and at a moderate per capita cost. As the Medical Society of Virginia is soon to convene, we would be glad to see it take some step in the direction indicated. To add such a feature would be to make the organization, as it now stands, of material use to its constantly dying members, while it would also be an inducement to some worthy doctors not now members to join the Society, and thus increase its influences and benefits.

The Free Dispensary of the Richmond City Hospital

Is located on the lot, corner Clay and 11th streets, just purchased by the College of Physicians and Surgeons. While supplying the indigent sick of this community with a much needed charity, it will add largely to the material used for clinical instruction in that institution. The organization of the different departments is as follows: Dr. James N. Ellis, Superintendent; Dr. Armistead L. Wellford, General Medicine; Dr. Paulus A. Irving, Diseases of Children; Dr. J. M. Winfree, Diseases of Women; Dr. John F. Woodward, Diseases of the Nervous System and Skin; Dr. Virginius W. Harrison, Diseases of the Genito-Urinary Organs and Syphilis; Dr. James N. Ellis, Surgery; Mr. John T. Lewis, Druggist.

Dr. A. S. Priddy, of Keysville, Va.,

We are glad to see, has consented to become a candidate for election as a member of the House of Delegates of Virginia. As many medical matters will probably be brought to the consideration of the Legislature, it is very fortunate that such a representative member of the profession as Dr. Priddy consents to serve. We wish others like him would agree to be legislators—at least for a term or two. It is a sacrifice, we know, for a regular practitioner to become a member of the General Assembly; but unless some of the profession will serve, how is it reasonable to expect that medical questions will be intelligently dealt with. Had doctors enacted the law establishing the State Board of Health in 1871-2, no such farcical enactment would have been upon the statute books as that now there, which provides that the *Virginia State Board of Health* shall not be an expense upon the State Treasury. Dr. Priddy has the best wishes of the profession of Virginia as to his election; for the profession will want a leader in the Session of the General Assembly of 1893-4.

Discoverer of Modern Surgical Anæsthesia Again.

We are promised for our October number a further "Contribution to the History of the Discovery of Modern Surgical Anæsthesia, with Some New Data Relative to the Work of Dr. Crawford W. Long," by Dr. Luther B. Grandy, of Atlanta, Ga. We have been favored by the author with advance MS. sheets, which correct some trivial errors in the memorable paper of Dr. J. Marion Sims, as it appeared in the May No., 1877, of this journal; and his data undoubtedly go to establish the unquestionable claims of Dr. Long as the one to whom the honor of discovery rightfully belongs.

New Professors, etc., Medical College of Virginia.

During the July meeting of the Board of Visitors, the recently-established Chair of Ophthalmology and Otology was filled by the election of Dr. Chas. M. Shields, of Richmond, Va., who has long and faithfully served as Lecturer in this department. Dr. Shields brings to his Chair experience as a teacher and popularity as a practitioner in his specialty. His election as Professor was unduly long deferred, for the College must feel it has been benefitted

by his years of connection with it. Dr. G. W. Long, of Randleman, N. C., Lecturer on Urinalysis in the School of Pharmacy, Trinity College, N. C., was chosen Professor of Diseases of Women, vice Dr. J. S. Wellford, who has been honored by the title of Emeritus Professor. Dr. Long has been an active member of the Southern Surgical and Gynecological Association since its organization. Dr. J. N. Upshur was re-elected Professor of Materia Medica and Therapeutics. It was deemed best to defer the election of a Professor to fill the recently-established Chair of Histology, etc. Several appointments have since been made in the Adjunct Faculty, as indicated in the advertisement on the card-board page in this issue. During the summer, a number of needed repairs have been made in the building, which improve its appearance and comfort. The session will open September 26th.

College of Physicians and Surgeons, Richmond, Va.

As it was found impracticable to secure sewer arrangements and water and gas mains for the Pinel site before next year, the Boards of Directors of both the College of Physicians and Surgeons and the Richmond City Hospital have purchased all the lots fronting on the north side of Clay street, between Eleventh and Twelfth streets, and are actively at work preparing the several commodious buildings on this block for both the College and the Hospital. The College is diagonally across Clay street from the residence of President Davis during the War, which is now being rebuilt for the Virginia Historical Society. The Hospital is diagonally across Clay street from the Valentine Museum. The Sheltering Arms Hospital is only a half block (between 10th and 11th streets). The Retreat for the Sick is about a block and a half from the College, and the Richmond Eye, Ear and Throat Infirmary is less than two blocks further. It is expected that the Richmond City Hospital will be ready to receive patients by October 1st, and the College will be ready before its opening day, October 3rd, while its Dispensary will be forthwith organized. Other Dispensaries under control of the Faculty will be established, so that clinical material for both the medical and surgical, and for the dental departments, will be ample. Inquiries addressed to the President of the College of Physicians and Surgeons, Richmond, Va., Dr. Hunter McGuire, or the Secretary, Dr. Joseph A. White, will receive prompt attention. See advertising pages 54 and 55.

The Virginia State Board of Health

Held its Quarterly Meeting in Richmond early in July—which was attended by the President, Dr. Rawley W. Martin, of Chatham; Dr. Paul B. Barringer, of the University of Virginia; Dr. Jas. Parrish, of Portsmouth; beside the three resident members. The Secretary, Dr. Paulus A. Irving, of Richmond, presented reports to show that a very healthy scare of an epidemic of small pox in some of the Southern counties of the State has just occurred, which has led to very general vaccination among the people of that section. Means were discussed as how best to apply them to avert the occurrence and spread of cholera in this State, if, perchance, a case should arise. Improvements in the law establishing the Board, extending its powers, etc., were considered, and a Committee was appointed to formulate such changes in the law as seem needed, which report will be discussed in detail during its Fall Session in October. In the possible event of the threatening of an invasion of this or other epidemic disease, the Board can be promptly convened. In the meantime, the members resident in Richmond will act as an Advisory Board. The Chamber of Commerce of Richmond has contributed a portion of its subscription, which partially puts the Board in a position to serve the State in the event of necessity.

Reduce Time for Reading Papers.

Too much introduction and non-essential matter to the point in hand often causes loss of appreciation of the very thing the author of a long paper wishes to emphasize. Besides, the author of the paper to follow soon begins to whisper to those around him that the paper which is being read is too long and commonplace; and thus creates a desire on the part of the hearers for this paper to cease and for the next paper to come on. As soon as an author carries to the reader's desk a bulk of MS., those in the audience-room at once begin to look for their hats, and then the smoking-room or lobby. Now, all of this can be, in great measure, obviated by requiring a limitation of time to be occupied by the reader—say to twenty minutes each. The New York Academy of Medicine has recently made a rule of allowing only ten minutes to the reading of a paper, and it is said to be a very decided success. Bring out the one point desired, and give a chance to the others to say their say, and thus let all be made to realize an interest in the discussions.

J. Addison Hodges, M. A., M. D.

We are pleased to announce the completion of the Faculty of the College of Physicians and Surgeons, Richmond, Va., by the election of Dr. J. Addison Hodges, of Wilmington, N. C., as Professor of Anatomy. He was born and raised in Fayetteville, N. C., and is one of the distinguished family of physicians by that name in our sister State. He is an academic graduate of Davidson College, N. C., and received his medical degree from the University of Virginia. After spending some time in the larger centres, he returned to Fayetteville, and rapidly rose to prominence in the profession of his native State. Two or three years ago, he removed to Wilmington, N. C., and soon gained a leading position in the able corps of practitioners of that city. He is a gentleman of marked social qualities, which make him popular wherever he is known. His industrious, painstaking habits, in whatever he undertakes, is one of the elements of his success. He is cultivated in literature, science, and art, and is endowed with oratorical powers of no mean order. In short, he is conspicuous for his general attainments, and it is the universal opinion of his numerous friends that the College of Physicians and Surgeons, Richmond, Va., is to be congratulated in procuring the co-operation of so competent a gentleman. Dr. Hodges will move to Richmond in ample time to enter upon the discharge of his duties as Professor of Anatomy, beginning October 3rd, 1893.

American Electro-Therapeutic Association.

The Third Annual Session of this Association will be held in Chicago, Ill., September 12-14, 1893. The selection of place and time, it is hoped, will insure a good meeting of this most valuable Association. Dr. Margaret A. Cleaves, 68 Madison Avenue, New York, N. Y., Secretary, will respond to all letters of inquiry in the interests of this Association.

The Mississippi Valley Medical Association

Will hold its Nineteenth Annual Session in Indianapolis, Ind., October 4-6, 1893. Titles of papers to be presented should be sent as early as possible to the Secretary, Dr. F. C. Woodburn, Indianapolis, Ind. Dr. G. J. Cook is chairman of the Local Committee of Arrangements. Dr. R. Stansbury Sutton, of Pittsburg, Penn., is President of the Association.

Wm. R. Warner & Co.'s Exhibit at the World's Columbian Fair.

In the northwest corner of the gallery of the Manufacturers and Liberal Arts Building is the department of Pharmacy, etc. The position is of general interest because the spectator can look from the gallery upon the grand exhibits below, and shows the magnitude of this building, which has 44 acres of floor space. The exhibit of Wm. R. Warner & Co. is located in Section D, 101 at junction of two avenues, and comprises 400 square feet. It consists of a pyramid 16 feet high, with steps forming shelves to the top, surmounted by a gilt statue of Mercury. Seats for visitors are around—a most thoughtful provision, as all will appreciate who undertake the “doing up” of any of the buildings. The Warner design moulded bottles contain such preparations as sugar and gelatin-coated pills—flat, oval, white, blue, pink, and yellow; other preparations are fluid extracts, elixirs, effervescing salts, including bromo-soda—so highly extolled as a remedy in sea sickness, migraine, etc. The firm was founded 1856, and occupies the most prominent position, in their particular line of manufactures. Branch stores are in New York as well as Chicago. Messrs. Newbery are the London agents.

Obituary Record.

James McCann, M. D., LL. D.

A committee of the Faculty of the Western Pennsylvania Medical College, Pittsburgh, have issued an “In Memoriam” of this devoted member of the profession, whose axiom was “A physician’s first duty is to *his patient*; his second only, to himself.” He was the organizing spirit of the Western Pennsylvania Medical College, in which he was Professor of the Principles and Practice of Surgery. “He died a martyr to his profession—a sacrifice upon the altar of charity.” “He performed an enormous amount of work; and it was in the performance of a surgical operation, a work of charity, in the Western Pennsylvania Hospital, that he received the fatal shaft from the quiver of the fell destroyer.” Such men are a blessing to people, an ornament to the profession, and a tutor of science. We regret lack of space prevents more extended notice.

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Original Communications.

ART. I—Report of Some of the Surgical Work at the New
Emergency Hospital During the Past Year.

By JAMES KERR, M. D., M. Ch., Washington, D. C.

PROFESSOR SURGERY MEDICAL DEPARTMENT GEORGETOWN UNIVERSITY; SURGEON TO
EMERGENCY AND CENTRAL DISPENSARY HOSPITAL, PROVIDENCE AND WOMAN'S
HOSPITALS, WASHINGTON, D. C.

One of the principal drawbacks to successful surgery lies in the fact that a great proportion of the cases are seen in a stage when success is no longer possible. The operation fails owing to the condition of the patient or the condition of the part.

We might enumerate in this connection the causes that produce intestinal obstruction: Malignant disease; inflammatory attacks within the serous cavities, that result in purulent formation; specific processes, that endanger life by becoming general. All these, in fact, that were once treated by opiates and expectation are coming within the category of surgical diseases and in the province of the surgeon. It is now no longer competent for one to allow

* Read before the Medical Society of the District of Columbia, June 7th, 1893.

these patients to die without recourse to higher aid than drugs, or to deny them until too late the only chance that science offers—an operation. What is true of these regions is also true of the bones and joints; here modern method tends to conserve, but as a rule the case comes to the surgeon when there is nothing to be done but to destroy. The surgeon should have a higher function than the operative one.

Thus it has happened that the operating surgeon has become the "bogie," both of the family physician and the family itself. It is not altogether his fault, nor is it correct to assume that he is always going about with concealed weapons, and that he is a creature of "blood and iron," glorying in gore and grewsomeness, and only to be appealed to as a last recourse. He appeals to modern medicine in the light of its present standing to be consulted earlier than heretofore; he may not be able to do more than is being done—it may not be advisable that he should—but let him share the responsibility of those cases that modern progress has assigned to him, even before the question of operation has been considered. He should be the one best qualified to judge of its advisability.

In view of these facts, and because we only see cases in their worst stages inside the hospitals, a reference to dispensary work and its value as a means of study may be worthy of your attention. Sir Andrew Clark in England and Osler in this country, have both emphasized its advantages.

To be able to apply to cases that are met with every day in general practice—minor cases, as they are called—all that is best and most progressive in modern surgical methods, implies the very highest application of the science. These can only be seen and learned in the externe department.

The same scientific principles underlie the successful treatment of a phlegmon or scalp wound that control success of an arthrotomy or a craniectomy, and the man that is not accustomed to get success in the one class of cases cannot be trusted to get it in the other.

For these reasons, I am induced to bring before the Society

some of the surgical work done at the Emergency Hospital during the past year, from the conviction that it will be of interest to the members to know something of this work and the methods by which we accomplish it. I am also induced to believe that if the practice now in vogue in this and most hospitals in this country were considered worthy of more attention by those who are desirous of improving their knowledge and experience of surgery, by traveling abroad, we should hear less of the surgical wonders they find in Europe, and more of the merits of the surgery of their own country.

Science and surgery have no geographical limits, and the American who first qualifies himself for a tour of profitable study abroad, by first knowing something of what he is going to see there, and then familiarizing himself with the practice in his own country, will not only greatly enhance the pleasure and profit of his labors, but save his countrymen the familiar humiliation to be seen in Europe of exhibiting ignorance of methods that have long become every day practice here. I so frequently see the Deutscho-Gallo-Anglomaniac who never again, after he has been to Europe, have a word to say for his own countrymen, and his own teachers, to whom he probably owes everything he knows.

I may not be much of a judge, but I assert that I have seen just as good, if not better, surgery in Baltimore than in Berlin; just as good in New York as in Paris, and just as good, if not better, in Boston and Philadelphia as in London. But our traveling friend walks with nose in the air past these masters of the art at home to gaze with obsequious respect on the back hair of even the whipper-snapper assistants in the European clinics.

As will be seen, there have been treated in the surgical clinics a goodly variety of surgical diseases and injuries. Speaking generally, the great majority of these traumatic cases are attended by the house staff under my direction, but all surgical cases presenting any difficulty of diagnosis or of a serious character are seen by myself.

Here let me testify to the care and efficiency of the gentlemen on whom falls the great proportion of this work. Their position is not, by any means, an easy one to fill, while it carries with it the only reward that the charity hospital laborer gets—instruction. It demands of us, teacher and pupil alike, a combination of prudence, devotion, and a high sense of responsibility towards the patient, the profession and the public, that is not always easy to find, and which we do not all pretend to possess.

First, as to *Wounds*.—885 treated.

These have included every variety of incised, contused, lacerated, punctured, gunshot and poisoned. As I said, these are attended to by the house staff, and to their credit, it is to be recorded, that I have only seen myself half a dozen out of this number, that have not healed by first intention, when they have been attended throughout at the hospital. Phlegmon, erysipelas, suppuration, as well as their constitutional accompaniments, septicæmia and pyæmia, have been in recent wounds practically banished from our hospital.

There is nothing, I hope, that it is necessary to say as to how these results were obtained, beyond following and carrying out the laws of scientific surgery. I may say that in general in the Emergency room we are *antiseptic*, and in the operating room *aseptic*, as far as the interior of wounds is concerned.

The conditions that surround wounds in the Emergency Department rarely admit of their being trusted to purely aseptic methods; and, acting on the principle of better being "sure than sorry," we use germicidal agents freely. The majority of these wounds occur in people who are in active occupation and in positions (and often in conditions) that a dressing, no matter how securely applied, can seldom be depended on to remain undisturbed, and every available precaution that will avert sepsis is demanded. There is, and always will be, a limit to asepticism. It can never be the ideal treatment of wounds that have incurred septic

risks; and where we now recognize the local disadvantages of antiseptics in wounds, and their constitutional dangers, there is greatly less to be apprehended in their use.

In deliberate operative proceedings, undertaken in the hospital proper, it is very different. In all cases, not already septic, our operations are conducted aseptically, except as far as the skin itself is concerned.

I would not trouble you with the technique, which I do not claim differs in any essentials from that prevailing in most hospitals, but as this is only every-day surgery, you will pardon, I hope, these commonplace details. We use heat for sterilizing everything that goes into or near the wound, except our hands and the skin of the patient, which are prepared by scrubbing, alcoholic, carbolic, and sublimate dressing respectively. We add the precaution of a permanganate and oxalic acid bath to our own hands.

I have not for years used a sponge, other than gauze and cotton, nor for nearly the same time used other drain in clean wounds than a few strands of catgut or silk, or piece of iodoform gauze where a drain is necessary. We often allow the wound to fill up with blood-clot where there is a considerable space to fill, but, as a rule, we get as nearly as possible a dry wound. The hæmostasis is prevented to the utmost extent by sponge pressure, following the line of incision and kept under control until the forceps are applied. In this way operations are conducted with a minimum loss of blood and much diminished exposure to unnecessary handling. Before closing the wound, it is flushed with sterilized salt solution, a procedure that is, in my opinion, unobjectionable. It is inevitable that, during the course of a prolonged operation, something undesirable may have gained access to the wound, and this method seems to me less open to criticism than any other. Sponging the wound does not reach its irregularities, and antiseptics do a certain amount of harm that we are not justified in doing if it can be avoided.

We do not use catgut, as a rule, but nearly always silk and silk-worm gut. I much prefer the latter for the skin. In the

Emergency Department, horse hair is the favorite suture for the face and scalp. We use great numbers of towels to surround the field of operation and to cover the patient. These we sublimate, and they are renewed frequently during the operation without disturbing those underneath. In hernia and abdominal operations, they are afterwards deprived of their sublimate by squeezing out of hot water. I am a great believer in their importance, and cannot see any possible objection, but a positive advantage, to their being sublimated rather than sterilized, as is at present the fashion. It is an additional precaution, and until we are able to deny the assertion, "that antiseptic surgery is not always 'cock-sure' surgery," we cannot, except under peculiarly favorable conditions, afford to dispense with any detail that ensures additional success, and that cannot, on scientific grounds, be objected to.

So that, to summarize: We use the full antiseptic technique in the Emergency service (except as far as the sterilization of instruments is concerned, which we sterilize by boiling), and in any other cases where there is any suspicion of sepsis having occurred during or before the operation. Our dressings, however, are all aseptic, and are only changed on local or constitutional indications. As a rule, we dress our cases at the end of the first or second week. Our dressings are always liberal in extent and quantity, and made as secure and immobile as possible—the former by adhesive strips, whenever necessary, and the latter by wet crinoline bandages, which, on drying out, give the whole dressing a fixity and firmness that leaves nothing to be desired.

If there is any one method in dressings more than another that I would desire to emphasize the importance of, it is *iodoform gauze packing* in the treatment of wounds within the serous cavities. We all know the rapidity and fatality with which a septic inflammation spreads through a serous membrane. I can instance case after case in this list where I am confident fatal results were averted by these means in nearly every serous cavity in the body.

In two cases particularly I ascribe the salvation of the

patients to this procedure alone, under circumstances that do not admit of a doubt that by any other plan of treatment they would have ended disastrously—one a general septic peritonitis and the other septic meningitis. If I may be allowed to quote from the records of my work for the past year at another hospital, the *Providence*, I would cite one additional case in evidence of the efficiency of this method. A laparotomy wound made in a patient of Dr. Moran for the relief of supposed malignant disease, but which turned out to be a retro-peritoneal accumulation of pus, the precise origin of which we have never been able to determine, gave way two weeks after operation during an effort at defecation. In the morning, Dr. Hall, the house surgeon, and myself found about twenty feet of intestine outside the abdomen and outside the dressing. These had been lying on the abscess dressing (the abscess had been opened afterwards behind the peritoneum in the left iliac region), and we were an hour at least cleaning them from the pus, oakum, and inflammatory exudate with which they were covered. They were, after great difficulty, owing to distention, returned, and the infected area packed round with about a yard of iodoform gauze. The patient recovered after a sharp saline purgative, and is now well. I believe the more than average good results we reached in penetrating wounds of the chest are also greatly due to this plan.

Amputations—22.

One death from traumatic pneumonia on sixth day. The wound found at autopsy absolutely without any evidence of inflammation or disturbance, and progressing towards recovery.

We have had no occasion to use any form of drain in amputation wounds. More than once we have, on removing the dressings at the end of one or two weeks, found at the edge of the flaps the blood clot undergoing organization, just as I have seen it in Lister's wards over twenty years ago, and in Schede's and Halstead's since, demonstrating

its harmlessness *per se* when properly provided for. We have never had to disturb a dressing before the end of the first week, except for excessive oozing; never for pain, never for pus, and never for fever. In the fatal case, the cause of the constitutional disturbance was recognized to be due to the condition of the lung, and the dressing was not disturbed.

Head Injuries: 17 Concussions; 15 Fractures, 7 of vault or all operated on, 8 of base not operated on.

Of head injuries we have had a liberal allowance, of course. Of seventeen concussions, all recovered but one, who died from subsequent encephalitis, attributable to his own unmanageable disposition. That condition best described by Erichsen as irritation, associated with severe cases of concussion, we have more than once observed during the past year. It is a condition marked with great irritability of temper, indisposition to comply with ordinary requests to take food, put out the tongue, turn around, etc.; the patient is either lying curled up or away from the light, or tossing and turning in semi-conscious complaining condition, difficult to control, and particularly hard to manage, *requiring to be restrained without force and controlled without excitement*. These cases are apt to end disastrously if not properly handled. They are specially liable to end in encephalitis or meningo-encephalitis, or some mental or other functional impairment, if not before the subsidence of these symptoms, at some more or less remote period.

The general management of head injuries with us comprises carrying out exactly absolute quietude in a darkened remote corner of the ward, with as noiseless surroundings as possible. Purgation and special attention to the condition of the bowels, warmth to the surface and cold to the head, keeping the patient, in all cases where unconsciousness has been at all deep, several weeks under this treatment.

Fractures of the Cranial Vault: 7; all operated on; no deaths.

The details it is unnecessary to give. Our practice is to

elevate in every case of depression with or without symptoms of compression, and explore in all severe head injuries where fracture is suspected. By exploring I mean reflecting the scalp at the site of injury.

To these seven cases operated on for depression I would like to add three others of special interest—one a depressed fracture of the temporo-sphenoidal region, produced by a blow from a brickbat. The patient, a boy aged 14 or 16, was seized afterwards with convulsions, and at the time of operation was in a condition of general contracture, which entirely ceased from the moment the depression was relieved. During the craniectomy and elevating the depression, hæmorrhage was very violent from the anterior division of the middle meningeal, which was, however, easily controlled by packing. Hæmorrhage in brain surgery, from my experience, is sufficiently amenable to packing, even when the sinuses are wounded, as not to be cause of great anxiety.

In one case, during an operation for elevation at *Providence Hospital*, the lateral sinus was found to be involved and bled profusely, but was promptly and permanently controlled by iodoform gauze packing.

I present here the chisels that I have been lately using in operating on the cranium. The angular chisel is that suggested by *Hartley*, and in my experience works very well. The advantages of the chisel over the trephine is in allowing, in operations requiring extensive exposure of the brain, the scalp and bone to be reflected in one flap and of more rapid work.

There is also, I find, less hæmorrhage from the diploe than when trephine is used. In one case of traumatic epilepsy, we made a very satisfactory exposure of a rectangular flap of bone in the temporal fossa with this chisel, which I had made for this purpose.

In nearly all the cases we have replaced the bone. On removal from the skull, it is wrapped in a sponge and kept in a warm, sterilized, salt solution. So far, we have had no occasion to regret our efforts to restore the integrity of the

Septic meningitis set in 18 hours after elevating, indicated by temperature 104° , rapid bounding pulse, tender hot scalp, contracted pupils and delirium. The patient was again taken to the amphitheatre, the scalp and temporal muscles reflected, the bone that had been replaced removed, and the entire area irrigated. The bones were not again replaced, but underneath the elevated piece, iodoform gauze was loosely packed, and the wound left open. Two hours afterwards the temperature fell to 102° , and since he has continued to improve.

I would earnestly commend the procedure under similar circumstances, and would, from this experience, support the proposition to do a craniectomy in cases of meningitis other than traumatic. I believe that the rapid course and terrible mortality of intracranial inflammations is largely attributable to the unyielding character of the brain case, in relation to the important and delicate organ it contains; and while the cavities of the meninges cannot be treated wholly as the peritoneum can, if we can locate the focus of septic invasion, and as promptly relieve tension, give exit to inflammatory exudate, pack and drain with gauze, we can probably get the same satisfactory results as follow these procedures in the peritoneum and other serous cavities.

It is unnecessary to add that although we have had among these cases frequent occasion to deal with lacerated dura, and have not always been able to restore the dural covering (I have had no experience in substituting for the torn dura pericranium), yet we have had no hernia. These are believed now to depend on septic processes, and where there is no sepsis, even where the dura is extensively destroyed, there is no hernia. And we have had no sepsis, except in this one case, and here there has been no hernia.

I would like to refer, before concluding this sketch, to the other cases I have had during the year, both at the *Providence* Hospital.

The first case, G. A. R., an engineer on the Pennsylvania Railroad, whom I present to you to-night, was thrown out of his cab, his head striking the rail or end of a tie on the next track. He was brought to the hospital some hours

afterwards, and presented probably the most severe head injury that I have known of to recover. The left vault of the cranium was involved from below the superior curved line to two inches in front of the coronal suture, the fracture involving all the bones of the vault, and extending laterally from one-half inch from the sagittal suture four inches outwards at broadest part of the depression. The bones were much comminuted, and brain matter was freely bespattered over patient, hair and clothing. The lacerated scalp exposed the bones beneath; the dura was torn and exuded brain matter over an area eleven inches in extent. The bones were easily elevated by the aid of two trephine openings. The central fragments were so ingrained with dirt and grease, from contact with the tie or ground, that I feared to leave them in. The torn dura was stitched, but not wholly so, as it was so lacerated that we found it impossible to entirely restore it. The patient made a good recovery. He complained of noises and deafness in the right ear, and had for a short time right hemianopsia and a feeling of stiffness and numbness in opposite leg. This is the case where the lateral sinus had to be packed with iodoform gauze. The ear and eye symptoms improved, as did also the motor symptoms affecting the leg.

One symptom deserves special notice. The escape of cerebro-spinal fluid continued for five weeks, showing probably a communication with the lateral ventricle. This escape was very free, saturating every night a very thick head dressing of gauze and the pillows. There must have been quarts of this fluid lost, but yet no symptom at the time or subsequently seemed in any way to indicate it. This patient had a very prominent swelling over the site of the injury which is gradually subsiding, and he is now in perfect health, and has returned to his engine, and his run—one of the most important of the Pennsylvania system.

The other case was an exposure of the motor area (now convalescent) for left brachial contracture and aphasia in a child nine years of age. An illness occurred about a year before, ending in a convulsion, out of which the patient came with contracture of left arm and wrist and complete aphasia. The case was referred to me by Dr. James T. Young, for operation, which was decided on after further consultation with Drs. Tompkins and Bishop. At present,

it is too soon to anticipate the ultimate result. The contracture is certainly relieved, but the failure of most of the motor centers to respond to the Faradic stimulus (except those of the thumb and wrist) I fear offers but slight encouragement for the other symptoms. The patient had very little shock; is now completely over the effects of the operation, and all the divided structures healed *per primam*.

My only reason for citing this case is to add to the additional evidence that is daily accumulating, of the ease and immunity with which we can expose and explore the interior of the cranial cavity over even wide areas. In this case the cortex was exposed an inch on each side of the lower Rolandic fissure over two-thirds of its course.

Rupture of the Bladder.—2 cases; 1 death.

There occurred two cases of rupture of the bladder during the year. One case died in a few hours after admission without operation. The condition in our judgment did not warrant it.

The other case is of sufficient importance to deserve dealing with somewhat more in detail. As I intend to report the case more fully for the purpose of placing it on record, there being only twenty-eight such recorded, I will merely describe it here as one of intra- and extra-peritoneal rupture, associated with fracture of the pelvis, extravasation of urine into and behind the peritoneum, marked by profound shock and the occurrence of peritonitis. We performed laparotomy, stitched the bladder laterally to the front of the pelvis to wall of the ruptured part, as we failed to reach the rent itself, and treated it by the open method of packing the pelvis behind the bladder with iodoform gauze, and draining the bladder and the prevesical space. The patient made a good recovery, although his condition for the first twenty-four or forty-eight hours was very alarming; at first from shock, and secondarily from threatened peritonitis. That he did not succumb from the first he owes to my assistants, Drs. Boss and Sillers, who watched him for me, and that the second complication was averted is attributable to the open treatment and saline catharsis. He was

to have been here to speak for himself, but like many of his class the gratitude in them is not always equal to the interest they incite in us, or the trouble and anxiety they give us.

Contracture of the Hand and Fingers from Burns—Two Cases—one of which I will show you.

Miss C., when a baby, had the misfortune to receive a severe burn of the left hand, resulting in the complete webbing of the second, third and fourth fingers up to the middle of the second phalanges. I treated her, by dividing the web back beyond the normal cleft of the fingers, dissecting off the entire cicatricial tissue from the palm, the front and sides of the fingers, and covering with Theirsch skin grafts taken from the arm. We used a graft for the front and side of each finger.

In my opinion, the success of this method depends on being able to have as few grafts as possible, as vicious cicatricial contraction will recur around the edge of the grafts where they unite with each other and the sound skin, but does not occur in the graft itself. You have seen before in the photographs I showed the Society last year, how easily and successfully this method can be depended on for covering large areas with skin without the contractions that are the inevitable result of ordinary cicatrization. This is the chief merit of the Theirsch method, and no where does cicatricial deformity occur so obstinately as in the palm; but to be successful here we must limit the grafts. As you will see in this case, every graft is surrounded with a ridge of contraction, while the grafts proper are smooth and healthy.

Gunshot Wounds of the Head: Penetrating—Two cases.

In the first case the bullet was split; one-half of it found underneath scalp and lodged in the bone, but not penetrating the cranial cavity the other half was found at the outer and upper end of the frontal sinus, imbedded but not penetrating the cranial cavity.

The second case was of more interest. The patient was a suicidal maniac. He discharged seven shots of a No. 22 revolver into his head inside of a radius of about two inches above and in front of the left ear. The majority of the shots were found imbedded in the outer table. Five of

them were removed. Two balls penetrated the cavity through a circular opening $2\frac{1}{2}$ c. m. in extent. An effort was made to locate and remove these, but unsuccessfully, and here again we had an opportunity of demonstrating with what safety the brain tissue may be disturbed.

Probing failing to locate the bullet, I introduced my finger to a depth of three inches across the temporo-sphenoidal lobe, and thoroughly explored this region, without, however, detecting the bullets, but without doing a particle of injury so far as results show. The patient made an uninterrupted recovery, but his suicidal tendencies again manifesting themselves, he was committed to St. Elizabeth's.

Patellar Suture.—4 cases.

Of these we have had four cases—one compound, the other for non union. The operation in each case resulted in bony union, and in no instance did the arthrotomy result in any local disturbance whatever. They all healed *per primam*. The quilted wire suture was used, the ends turned down and hammered into the surface of the bone. I also had an opportunity of verifying McEwen's statement of the presence of the torn pre-patellar aponeurosis as a factor in preventing close approximation and bony union. We only adopted this procedure in cases of disability, owing to stretching of the ligamentous union. We treat patellar fractures, when we have the opportunity, by first reducing the inter-articular effusion, then secure apposition by adhesive straps and plaster-of-Paris immobilization to entire limb. In one case we applied Bryant's elastic stirrup, As the patient removed it, we did not have the opportunity of verifying the claims made by its proposer. I am of the opinion that this contrivance would be available for keeping down the upper fragment after suture, but I am afraid it could not be trusted to do so in ordinary cases. It has the advantage of allowing the patient up sooner than other forms of treatment.

Herniotomies.—3 cases.

Radical operation after relief of the strangulation was performed in each case.

The fatal case occurred in a woman weighing 250 or 300

pounds. The hernia was umbilical, had been strangulated nearly a week, and she was brought to the hospital in a very bad condition. We found half the intestines and the whole omentum in the sac, to which they were everywhere adherent. There was general peritonitis, general intestinal distention, and a large quantity of sanious serous fluid in the cavity. We reduced the hernia after separating the adhesions, fastening a loop of suspicious intestine to abdominal wound, and packing wound with gauze (iodo); but in spite of every effort to counteract the depression of an operation performed under such very unfavorable circumstances, she sank and died 24 hours afterwards.

Transfusion.—2 cases.

Twice we transfused, and in neither case successfully, but perhaps in neither case was success possible. The simplicity and safety of the procedure, however, commends it. We used sterilized salt solution at temperature 100° – 105° . The apparatus is an irrigator, to which is attached an aspirator needle. The only precaution is the avoidance of the entrance of air or sepsis. The former requires that the solution should be escaping in a continuous stream at the moment it is introduced into the walls of the exposed vein. In each case temporary improvement occurred. The veins on the back of the hand showed up, and the pulse became recognizably stronger and fuller in a very encouraging and inspiring way, and I am inclined to think that if anything could have saved these patients, this would.

Penetrating Wounds of the Chest.—6 cases, 5 recovered.

Evidence of penetration—escape of air and blood from the wounds, or emphysema—no probing is practiced. I can but attribute some of the good results in these injuries to the method of treatment adopted in each case, consisting in immobilizing the chest wall by tight strapping, laying patient on injured side, and a full opiate to reduce the inspiratory effort to the lowest point possible—the wound being kept open and packed with iodoform gauze.

1711 H. Street, N. W.

ART. II.—Treatment of Appendicitis *

By JNO. W. DILLARD, M. D., Lynchburg, Va.

MEMBER MEDICAL EXAMINING BOARD OF VIRGINIA, ETC.

The treatment of appendicitis is as yet a matter of controversy. During the incipient stage saline cathartics—preferably the sulphate of magnesia—should be freely given, and at such intervals as to secure an early evacuation from the bowels, and in this manner remove the fæcal accumulations in the cæcum, which is commonly present. Hot water enemata should be given at least twice a day, if not too fatiguing to the patient. As soon as the bowels have moved freely, morphine should be given by subcutaneous injection, with a view of relieving pain and securing rest for the inflamed parts. Externally hot flax-seed meal poultices and the use of turpentine may be used to allay pain, and are thought to favor a *plastic* peritonitis. Cathartics are contra-indicated except during the incipient stage; and until the danger of perforation of the bowel has passed, liquid food only is to be given—preferably milk.

In *recurring appendicitis*, I believe in the non-operative treatment—trusting to rest, morphine and diet, combined with the judicious use of saline cathartics and enemata, to bring about resolution, in the hope that the existing attack will be the last.

An operation ought not to be thought of during the first few days; but as soon as there is *certainty* of the *existence* of an *abscess*, or of a *perforating* or an *ulcerative appendicitis*, no time should be lost in operating. The operation should be done under the most scrupulous, antiseptic care, and the particular form of operation had better be left to the judgment of the individual operator.

* Read before the Lynchburg Academy of Medicine, July 11th, 1893.

ART. III.—Practical Observations on the Formulas and Action of Certain Diuretics and Purgatives in the Treatment of Some Forms of Dropsy, Resulting from Various Causes, as Cardiac and Renal Diseases.

By JOSEPH JONES, M. D., LL. D., of New Orleans, La.,

PROFESSOR OF CHEMISTRY AND TOXICOLOGY, AND OF CLINICAL MEDICINE, TULANE UNIVERSITY, ETC,

We shall, in this brief article, endeavor to avoid theoretical discussions, tedious classification, and needless detail, and shall content ourselves with expressing some of the results obtained from our experience in the Charity Hospital of New Orleans during the past twenty-six years, and in private practice.

The successful *treatment of dropsy* must be based upon a knowledge of its various causes and effects, and upon the action of the various remedies employed.

Derangements of the due relationship of secretion to absorption in the tissues and cavities of the body may depend upon—

1st. *Derangements in the nutrition of the tissues, leading either to the increase of secretion or diminution of absorption.*

2nd. *Derangements or alterations of the blood, leading to derangements of the nutrition of the tissues, with an increase of secretion or diminution of absorption.*

3rd. *Derangements of the circulatory apparatus attended with venous obstruction and congestion, increased serous effusion from the distended blood vessels, and diminished absorption.*

4th. *Derangements of the functions of those organs which regulate the amount of the blood, as well as the constitution, by regulating the amount of the watery element, by the elimination of excrementitious materials.*

A. *Dropsy arising from the prolonged action of the malarial poison, characterized by destruction and diminution of the colored blood corpuscles, splenic enlargements, and hepatic derangements.*

Chronic hepatitis, parenchymatous hepatitis, portal obstruction, anæmia, and general anasarca, are frequent re-

sults of the prolonged action of the malarial poison in the Valley of the Mississippi.

The remedies best adapted to relieve the distressing and dangerous conditions induced by the prolonged action of the malarial poison may thus be enumerated :

(a) Sulphate of quinia, bromide of quinia, valerianate and hydrochlorate of quinia.

(b) Arsenic (arsenious acid, Fowler's solution).*

(c) Iron (the various preparations of iron—sesquichloride, citrate of iron and quinia, tribasic phosphate of iron, etc.)

(d) Mercurials in occasional doses, to relieve hepatic congestions and derangements, as blue mass, calomel, carbonate of soda and calomel.

(e) Saline purgatives, as bitartrate of potassa, Rochelle salts, sulphate of soda, and sulphate of magnesia.

(f) Diuretics, as juniper berry tea, nitric ether, jaborandi, pilocarpin, digitalis, etc.

The results are doubtful in those cases in which the liver has been structurally altered by the prolonged action of the malarial poison.

B. Dropsy resulting from valvular disease of the heart, mitral and tricuspid obstructions.

Valvular disease of the heart is attended with more or less hepatic obstruction, and benefit is often experienced by the judicious use of mercurials. Purgatives and diuretics are essential.

The agents used in the treatment of cardiac dropsy may be considered in connection with the following class :

C. Dropsy resulting from various structural alterations of the kidneys, included generally under the head of Bright's disease, acute and chronic nephritis, parenchymatous and interstitial nephritis, gouty and cirrhotic kidney, etc.

In this class of dropsy (C), as with that indicated by (B), all portions of the cellular tissue, as well as the abdominal and pleural cavities, may be enormously distended with serous effusions, and the skill of the physician is often taxed

to the uttermost to relieve the great embarrassment of the circulation and respiration.

The lesion of the kidneys attended with albuminuria may result from the cardiac lesion, and the latter may also result primarily from the former. In many cases, great and immediate benefit may be derived from various purgatives and diuretics.

The following formula may be used in many cases of dropsy arising from cardiac and renal lesions :

R_x.—Bitartrate of potassalb. j

Divide into sixteen packages. Add one pint of boiling water to one package (one ounce) of bitartrate of potassa, and to one ounce of juniper berries. Place the juniper berries (one ounce), and the bitartrate of potassa (cream of tartar), in a small porcelain pitcher or vessel. Cover the mouth of the vessel with a piece of mosquito netting or strainer, so as to prevent the juniper berries from pouring out.

Sig.—Stir the bitartrate of potash in juniper berry tea well, and drink a wineglassful every three or four hours, so as to consume the entire pint in twenty-four hours.

This mixture will induce both purgation and diuresis, and will, in many cases, rapidly induce the reduction of the most extensive and obstinate dropsies. The tincture and extract or infusion of digitalis will greatly promote the diuretic action of the juniper berry tea and cream of tartar.

I am in the habit of using from 6 to 10 drops of the tincture of digitalis every three, four, six, or eight hours, with marked benefit, in many cases of cardiac and renal dropsies.

In my opinion, digitalis is used in too large doses, and in a reckless manner, and often with fatal results, by many practitioners, who employ it usually in large doses.

In some cases, the practitioner may resort to various diuretics in addition to digitalis, as jaborandi, pilocarpin, uva ursi, buchu, acetate of potash, nitrate of potash, sweet spirits of nitre (nitric ether), and other agents.

I have found a benefit from several combinations, as the following :

Diuretic Wine for œdema, general anasarca, and dropsy, in cardiac and renal diseases.

R_y.—Fluid extract of jalap.....f ʒiij
 Fluid extract of squills.f ʒiij
 Fluid extract of jaborandi.....f ʒj
 Fluid extract of digitalis.....m xxx
 Nitrate of potash (pulv.)..... ʒiv
 Angelica wine..... Oij

M. f. s. a.—Sig.—One tablespoonful every three hours.

I have obtained most satisfactory results from this diuretic and purgative wine in the speedy and wonderful relief of the most extended dropsical effusions resulting from valvular disease of the heart.

I have also employed a diuretic mixture in dropsy resulting from cardiac disease, similar to that of Forthergill, as follows:

R_y.—Spirits of chloroform..... f ʒiv
 Acetate of potassa..... ʒiv
 Tincture of digitalis..... f ʒij
 Infusion of buchu to make in all...f ʒx

M. Sig.: Tablespoonful to two tablespoonfuls every two to four hours.

We have thus presented a few practical observations and suggestions, with the hope that they may prove of practical value.

In the treatment of the dropsical effects of hepatic, portal, cardiac and renal lesions and obstructions with purgatives and diuretics, the physician should endeavor to sustain the strength of his patients. No fixed rule can be laid down as to the amounts of the various diuretics and purgatives to be used in any given case; each case should be carefully examined and studied, and the effects of each remedy used carefully watched. The results of treatment will depend largely upon the nature and extent of the organic lesions.

In cases of ascites, dependent upon cirrhosis of the liver,

much may be accomplished by purgatives and diuretics to prolong life and overcome the constant tendency to the accumulation of serous fluid in the abdominal cavity; and when these measures fail, we must remove the fluid by the trochar.

In many cases of cirrhosis and ascites, caused by excessive spirit (alcoholic) drinking, we have frequently removed, by successive tapplings, hundreds of pounds. Sooner or later, these cases of ascites perish from the exhaustion caused by the repeated tapplings. In one case of cirrhosis of the liver, occurring in an Irish laborer, who had consumed enormous quantities of rum, gin and whiskey, it was necessary to evacuate the serous fluid from the abdominal cavity almost every seven or twelve days—from one to two gallons of serous fluid were evacuated at each operation. The patient died at the end of the sixth operation. Throughout his illness his intellect was clear.

In ascites resulting from the cirrhotic condition of the liver, death speedily ensues, if the distended abdomen of the patient is not relieved by the trochar.

Under all circumstances, and even in necessarily fatal cases, the physician may accomplish valuable service by relieving suffering and prolonging human life.

156 *Washington Avenue.*

Sennine—The New Antiseptic,

Advertised in this issue for the first time, is a product of phenol and boracic acid—two of the best known germicides; is a powder, readily soluble in water (1 part to 20 parts), non-toxic, free from nauseous odor, safe internally as well as externally, and is comparatively inexpensive. It comes in two-ounce tin box, with inner top perforated, convenient to dust on a wound, etc. Write to Dios Chemical Co., St. Louis, Mo, for sample.

ART. IV.—Injuries to the Eye.*

By R. H. CHILTON, M. D., of Dallas, Texas.

There is no other organ of special sense so much exposed to injury from external sources as the eye. It is less tolerant of injury than any organ of the whole human body. However, certain parts of this organ tolerate a great amount of injury, and yet recover their special functions. Other parts need only a very slight injury, as from the point of a needle, to destroy their usefulness. It is of supreme importance to understand, in every injury of the eye—be it accidental or inflicted as a surgical procedure—the probable final outcome of such an injury. Yet I find that authors devote but a small space to this important subject, and then usually only incidentally under the head of some other disease—not as a specific class of troubles to be met in the routine of practice.

The anterior third of the eye is not only the most exposed part, but is the part in which injuries prove most destructive, except in *injuries to the optic nerve*, which are very rare. An injury of the mildest character to the optic nerve, either by stretching or being otherwise lacerated, is nearly always fatal to the vision.

The *cornea* is susceptible of extensive laceration, and yet recovers rapidly and well; but an injury *over the pupil* is more or less destructive of sight and appearance, but will usually heal rapidly unless complicated.

An injury involving the *region of the ciliary body and peripheral portion of the iris* is usually followed by a high grade of inflammation. There are several reasons for this. The blood supply is greater, and the distribution of the ciliary nerves abundant. The action of the recti muscles, cles, as well as the muscular structure of the iris and ciliary muscles, tend to increase the action of the absorbents in proportion to the increased blood supply. This may facilitate the more rapid development of septic troubles.

* Read before North Texas Medical Association during its meeting in Dallas, June, 1893.

Wounds in this region, as well as in the cornea, are more likely to be influenced by septic surroundings than if situated further back, because the blood supply produces more rapid absorption of septic material.

Wounds involving the *sclera*, at the insertion of the iris, and the attachment of the ciliary body, are especially serious because of the sequelæ following them. There are two results especially to be feared from wounds in this region, even if no prolapse of iris or vitreous occurs, which further complicate the injury at the beginning. One is iritis, with occlusion of the pupil, which is always more or less destructive; the other is traumatic cataract. This always follows if the lens capsule is wounded, and frequently when it is not.

Another one of the sequelæ, probably of more vital importance than those named, is the effect on the other eye. I am now treating an eye wounded over thirty years ago, which has been regarded by the patient as a perfect organ, so far as vision was concerned, until a few weeks since. It has rapidly lost all power of sight, and now jeopardizes the fellow eye. In this case, an enclavement of the iris, from a simple knife wound, left this membrane tied down in an abnormal position, in such a way that the sight was not disturbed, but gave him service for thirty years.

No one can foresee when trouble will follow these wounds; but my experience has been that injuries, involving the ciliary region, or the iris with enclavement, will at some time give trouble.

Any wound of the cornea, or in the sclero-corneal region, with prolapse of the iris, should be treated at once. To be of lasting benefit, whatever is done, if of a surgical nature, should be done in a few hours. Injuries to the eye differ from those to other parts of the body in this respect. In order to replace a prolapsed iris, it must be done at once. The iris, if not prolapsed, but injured, will rapidly inflame, and if let alone, the pupil will be occluded with plastic matter.

The most deceptive injuries to the eye are found in the

lens and cornea. Often a small, penetrating foreign body passes through the cornea and iris without appreciable lesion, except by focal light, and is easily overlooked. The real injury is shown by traumatic cataract, iritis, or irido-choroiditis following later. Again, in wounds resulting from caustic substances, the superficial corneal layers may be lost without being noticed until the opacity develops in the healing. It is only by careful focal illumination that these injuries, as well as foreign bodies in the eye, with their results—blood clot and wounded vitreous—may be detected.

Small foreign bodies passing through the cornea and lens, often leave so little evidence of their passage, and produce so little primary injury, that they are overlooked till more serious trouble follows. Focal illumination and the use of a mydriatic should always be resorted to before giving an opinion concerning a wounded eye.

Dislocation of the lens, either partial or entire, is frequently the result of blows and lacerated wounds of the sclero-corneal region. This is an accident of great gravity, as the final result of such troubles is always problematical.

The length of this paper precludes the discussion in full of the proper treatment of these injuries. However, it is important to say, that if the lens is pressing on the iris, it is best to extract it at the earliest possible time. Traumatic cataract is often present in cases of luxation, and must be treated as other cases of traumatic cataract.

Any wound of the eye-ball, followed by iritis, cyclitis, or irido-choroiditis, is likely to be destructive to the vision. Inflammatory exudates, remaining after inflammation of the iris and choroid, is productive of sympathetic inflammation in the sound eye.

All penetrating wounds of the cornea should be carefully treated at the time of the injury. Delay is destructive. If a foreign body is in the cornea, or accessible through the corneal wound, it should be removed. If not accessible through the original wound, it should be removed by an incision. If in the iris, and can be seen, the foreign body

should be removed with forceps or the magnet. If prolapsed iris is present, it must be replaced or excised.

Wounds of the cornea and iris should always be treated with a view of saving the eye.

Extensive corneal wounds, even when accompanied by wounds of the iris, do not necessarily destroy the eye.

The more serious wounds are the penetrating ones in the ciliary region. Even in these, if no foreign body has passed in the eye to remain, an attempt may be made to save the vision. Should prolapsed vitreous be present, it is best to avoid further loss by suturing the conjunctiva and bandaging the eye with as little manipulation as possible, until the wound closes.

Foreign bodies in the eye are to be sought for, and extracted if possible. If it be iron or steel, even if deep seated, the magnet should be tried. If the foreign body is known to be in the eye, and cannot be extracted, enucleation should be done. Antiseptics should be used in dressing the eye, as in other surgical wounds.

The advice of authors, to use ice to prevent inflammation after extensive wounds, I believe to be detrimental. We do not use ice after surgical wounds; why in accidental ones?

Again, it is advised to use cold water for the first seventy-two hours; afterwards use hot water. I see no reason for using either till the symptoms demand them. Above all things, *rest*, with a mydriatic to prevent occlusion of the pupil by inflammatory exudates, is of the utmost importance.

In the management of cases of irido-choroiditis, or panophthalmitis from injury, especially if the sight is lost, enucleation is generally the safest. I would certainly enucleate if suppuration is present. I do not hesitate to condemn the advice of some writers, who advise an attempt to save an eye with suppurative choroiditis following a wounded eye-ball.

The reason often given regarding the action of foreign bodies in causing secondary inflammation, is that they are septic at the time of entering the eye. This cannot be

proven. In fact, it is fallacious and misleading. Explosives are not only made aseptic by heat at the time of explosion, but the metals used are filled with sulphur, nitrate of potash, and other antiseptics, making them, according to this theory, perfectly harmless; and yet we know just such injuries to be the most destructive.

ART. V.—Mistakes in Diagnosis.

By R. L. PAYNE, A. M., M. D., of Lexington, N. C.,

EX-PRESIDENT MEDICAL SOCIETY OF NORTH CAROLINA, ETC.

A few weeks ago, by chance, I re-read an article upon this subject in an old number of our *North Carolina Medical Journal*, and; although it is impossible for me to handle the subject half so well as that able authority has done, still, I thought it would not be out of place to add my experience, which has been extensive, and my knowledge, which is considerable, upon the same subject, to that already so ably given in his paper.

Much has been said and written of our brilliant successes and grand achievements in the practice of our "Divine Art," while too often our failures have been silently ignored, or quietly buried in the deep, deep grave of oblivion.

Now, although I am not a pessimist, I believe that it is well sometimes to report the bad as well as the good, so that others, out of our "wrecks may find a way to rise in," and thus secure the best interests of our glorious old profession. We are all liable to make mistakes, because human judgment and human skill are both very fallible; yet I believe that errors in diagnosis may very generally be attributed to some one, or all of the following causes:

(1.) Some errors occur simply because our examinations are made in a hasty and perfunctory manner, in order that we may get through as speedily as possible; whereas, we ought never to forget that every person who calls upon us

expects, and is entitled to receive, our most serious and careful attention, unless there be good reasons to the contrary; and even then it is better not to examine such an one at all, than it is to do so in a careless, hap-hazard way.

(2.) Want of knowledge of a part, or of all the different branches of medicine, as well as a want of good judgment and good hard common sense, are sometimes causes of the same trouble. A young physician once said to me: "I have a remedy for every ill which flesh is heir to." I replied: "I hope you are as able to know the ills which flesh is heir to when you meet them." But alas! he was never able to know the pathognomonic symptoms of simple intermittent fever; and, although he made a desperate effort, he was never a successful practitioner. Another one I knew, whose memory was most remarkable, who knew everything in the books, and could repeat it like a parrot, yet he too was a failure, because he lacked judgment and practical common sense! He could never apply what he did know!

(3.) Another one of the most fruitful causes of errors in this respect is over-confidence in our own abilities and acquirements, and this applies in a special degree to us while we are young in the profession; yet, I am forced to admit that many of us never live long enough to get over it.

With all the fresh health, vigor and ardor of youth, before even the *wire edge is worn off*, one is sometimes disposed to believe that he knows it all. Many doctors think that if they do not name the disease as soon as a case presents itself, they may be regarded as incompetent; and it is true that patients very generally demand a diagnosis sooner from young doctors than they do from older ones. They want to learn how much the young man knows; and it is hard for him or any of us to say, "I do not know as yet, because the case is not sufficiently developed;" but at last we have to come to it. The truth is, as we all know, many diseases cannot be diagnosticated in the outset, and this is especially true of the eruptive fevers. Who of us can certainly diagnose a case of measles before the eruption ap-

pears? The same question may be asked of many other diseases before the symptoms are developed which makes it possible for us to know.

Allow me now to present a few cases of "errors in diagnosis" and some evils resulting therefrom.

When my father was a student of medicine, Prof. Physick, while lecturing on the diseases of the liver, brought a man before the class to demonstrate the symptoms of a special disease of that organ. He pointed out each diagnostic symptom in the case so clearly and so impressively, and handled the subject generally so ably and so scientifically, that each member of the class felt confident that all he had to do was to look at a man and be able to tell the absolute condition of his liver. In a few weeks more, the man's body was again presented before the class for a post mortem examination, in order to prove the correctness of Dr. Physick's diagnosis. But alas, when the examination was made, the liver was found to be as sound as a dollar, and the symptoms in the case had all arisen from *disease of the duodenum*.

When I was but a young man, I was called to see an old lady who had been sick for several weeks. Her tongue was foul; pulse frequent and feeble; appetite poor; digestion bad; bowels constipated; and she was very much emaciated; but her greatest trouble proceeded from an annoying pulsation which could be felt and seen very distinctly a little to the left of the linea alba, and about halfway between the navel and the upper margin of the left hypochondriac region. I put my hand upon it, and with all the confidence of a young doctor, diagnosed a case of *abdominal aneurism*, and with great dignity and *empressment* I informed the family that the dear old lady was about at the end of her rope, and could not possibly live many days. This was not a case of aneurism, but simple *abdominal pulsation*, such as is seen often in cases of extreme debility. She recovered speedily under the treatment of another physician, lived fifteen years or more after I had seen her, and finally died of old age. I lost my reputation and practice in that family and immediate neighborhood, but gained *immensely in wisdom and experience*.

Since that time, I have known a number of the profession to make the same mistake; but I *never have*, nor can I ever forget old Mrs. Crouse and the *fifteen years* of her good health, *which haunted me like a nightmare!*

Upon a certain occasion, a physician who formerly practiced medicine in my county, wrote my father, asking him to meet him in consultation over a very bad case of "locked-jaw." Of course he went as speedily as possible, and found a case of locked-jaw—but locked with the mouth wide open!! It was a case of dislocation of the lower jaw-bone!!

Some years ago, a child, while playing with a small key, became choked, and coughed for a while spasmodically, but soon became quiet; and as the key could not be found, the mother supposed the child had swallowed it. Four or five weeks afterward, the child was troubled with an offensive and acrid discharge from the nose, and her physician was treating her for nasal catarrh with astringent douches, etc., etc. After a very careful examination, the key was found lodged up in the posterior nares, and after its removal, the catarrh immediately began to improve, and the child was soon well.

This was really a case of traumatic nasal catarrh, which might, with some show of propriety, have been called a *key-tarrh*!

A case of bladder trouble came under our care not very long since. The father of the boy told us that fourteen doctors had examined and prescribed for the child before we saw him. The last one of the fourteen diagnosed a case of bladder disease which was evident to anyone, and assured the father that the boy would "eventually outgrow it." We examined the boy carefully, found a stone in his bladder, which my son removed, and now in truth the boy has outgrown it.

I heard, upon good authority, that one of our physicians did absolutely put a large, fleshy woman upon the table and performed a laparotomy upon her, supposing he had a case of extra-uterine pregnancy to deal with, but when the abdomen was opened, nothing abnormal was found—even the tumor had disappeared. It was most probably a phantom tumor which could not resist the influence of the anæsthetic, or was simply a phantasm of the doctor's imagination.

It is said to be true, that one of our conscript fathers invited his friends to assist him in an operation upon a female for strangulated hernia.

After carefully cutting down, he did not find a strangu-

lated gut, or anything else strangulated, but only a hard substance, which he concluded was a *prolapsed ovary*. He removed it, and was not satisfied until he submitted it to a microscopist, who assured him that he had only an *enlarged lymphatic gland* as a *trophy* of his *surgical skill* and *astuteness*.

As the immortal Æsop formerly observed—"How we apples do swim!" however, I suppose that the modern blanket called exploratory incision, which covers a multitude of surgical sins in this day, is broad enough for all such cases.

In one of our counties is a young physician who has a special penchant for ovariectomy. Upon one occasion, he had his rooms whitewashed and made clean and aseptic for the reception of a woman from whom he was going to remove an ovarian tumor; but unfortunately for the doctor, and fortunately for the woman, she gave birth to a baby the night before her belly was to have been cut, and there was no need for an operation.

The cases just mentioned recall to my memory a mistake in diagnosis made by two of our most successful practitioners. Two such accomplished men could not have fallen into so greivous an error had they been more careful in their examinations, and more especially had they called the stethoscope to their aid.

The subject was a woman forty or more years of age. She had borne children, but none for fourteen years. Her catamenia had been irregular, appearing regularly for some months at a time, and then were absent for many more. Her face, hands and lower extremities were œdematous, and her abdomen was very much enlarged.

The doctors agreed in the opinion that it was a case of ascites, and the woman was put upon the regular treatment for dropsy.

One day the husband of the woman said to one of the doctors, "Doctor, I believe my wife is in the family-way, because she complains just as she used to do when in that condition." The doctor, who was a splendid specimen of a man, put both hands upon his own protuberant and magnificent abdomen and replied, "I tell you, sir, she is no more in the family-way than I am sir," and he *patted his own belly significantly*. Nevertheless, in a month thereafter, the woman had a baby and the dropsy disappeared.

One more case and I am done.

Before the war, I was called to see a child who had been ill for some weeks, and was now reduced almost to a skeleton. The messenger who came for me was a bright talkative little fellow, and volunteered a good deal of information relative to the patient, a portion of which I will give in his own language,

He said, "when the other doctor was thar last time he sot down by the cradle, and he sot and sot, and looked at the child, and all of a suddent he *run* to his saddle-bags and fetched out a long reed quill and a paper with a white powder in it, and he says to the child's mother, 'Madam, your child has got infermation of the sniderious member of her nose! Put some of this powder in the quill and blow it up her nose *two times* a day. The child may *git* better, and then *agin* she *mayn't*.'"

I found a deep-seated abscess near, but not in the hip-joint; and I could not help thinking that instead of blowing alum up the poor child's nose, the quill might have been inserted nearer the seat of disease with equally as much benefit, and it would at least have possessed the *virtue* of being a kind of "*vis a tergo*."

These are all glaring mistakes from want of care, and I hope my younger brethren will never fall into any of like magnitude. *Be careful*, for it is all a hoax that there are any such beings as "*born doctors*," who, by simple intuition, are able to diagnose every case of disease on sight; and if we desire to avoid blunders as much as possible, we must not only be thoroughly prepared, and apply ourselves assiduously to the duties of our profession, but must study our cases well, and examine them thoroughly.

But in this day of scientific advancement, with the microscope, the ophthalmoscope, the laryngoscope, and all the various instruments of precision at the command of every one, there is no excuse for many of the errors in diagnoses which are so often made.

With all these advantages, then, we may confidently hope for a very great and very general improvement in this respect. Still it remains true that no kind of a "*scope*" will ever make diagnosticians of some doctors.

ART. VI.—Ammonii Chloridum as a Remedy in Cystitis.

By GEORGE CORRIE, M. D., of Blossom Hill, Va.

Directing my attention somewhat particularly to the diseases of the pelvic organs, I have had opportunity to make trial of numerous vaunted agents, old and new, for the relief of cystitis; and finding the simple chloride of ammonium so much superior to all others, I feel it my duty to direct the attention of the profession thereto.

Some of the conditions I shall mention will, of course, demand operative or other measures for radical cure; but the above-named drug will be found of material service in preparing cases for operation, in palliating cases unsuited for operation, and as an adjuvant where other treatment constitutes the main feature.

I prescribe, ordinarily, a No. 1 capsuleful of Squibb's pulverized purified ammonium chloride, to be taken three or four times in the twenty-four hours, preferably when the stomach is somewhat empty, each dose to be followed immediately by a half goblet or a goblet of pure cold water.

The following are some of the conditions in which the drug has been given faithful trial, with most satisfactory results in *every instance*:

Cystitis dependent upon stone in the bladder; stricture; hypertrophy of the prostate; deposits of urates, etc.; gonorrhœa (male and female).

Cystic irritation from uterine disease or menstrual disorders; malarial effects; masturbation; early pregnancy; simple urethritis (traumatic) in newly-married women.

Cystic and renal sequelæ of la grippe.

In the majority of cases, it was simply surprising to note the rapidity with which the urine was cleared of bladder mucus, blood corpuscles, pus corpuscles, urates, phosphates, etc., the distressing symptoms disappearing therewith; and in no case did the salt occasion any gastric or other disturbance when taken as ordered.

No explanation of the *modus operandi* of the remedy is

offered. I must leave that for one having more leisure for thought and more expert in chemistry. Only practical experience is here given with the sincere hope of aiding those whose opportunities have been limited in the treatment of the diseases of the genito-urinary organs.

This short paper might have been written sooner had I not waited for a different evidence to *assure* myself of the real utility of ammonium chloride in bladder troubles.

Fill the capsules only as needed for administration, as the salt dissolves the gelatine in a short while.

ART. VII.—Notes on Sixteen Cases of Atypical (Mountain) Typhoid Fever—Exhibiting Symptoms Peculiar to both Typhoid and Bilious Remittent Fevers.*

By JOHN F. WOODWARD, M. D., Richmond, Va.

ADJUNCT PROFESSOR OF NERVOUS DISEASES COLLEGE OF PHYSICIANS AND SURGEONS,
RICHMOND, VA., ETC.

I am aware of the fact that Laveran, Dock, Stephen McKenney, Osler and others have written very clearly and extensively on bilious remittent, typho-malarial, continued remittent and intermittent fevers, but do not feel so sure that the definition, pathology and semeiology of the types referred to by the above-named authors, would lead one to a proper diagnosis from the onset in sixteen very interesting cases seen by me in one of our mountainous counties, during the summer and fall of 1891-92.

In every one of the sixteen cases there were symptoms peculiar to and characteristic of both typhoid and bilious remittent fevers, but in no case was there a succession of symptoms so prominent that an exclusive diagnosis could be made. I shall try and give in a few words the more general characteristics.

General Character of Cases.—An acute remittent or continuous fever, with no succession of phenomena, characterized by a hot stage; no well defined cold stage, no parox-

*Read before Richmond Academy of Medicine and Surgery, August 22, 1893.

ysm, but a tendency to rise of fever in the evenings; severe gastric irritability, with pains in limbs and head.

Causes.—Presumably bacillus typhosus, influenced by a peculiarity of altitude and the dry and hot summer or autumn.

Pathology.—The liver, spleen and, later on, the intestines, seemed to be the parts most affected, while they all assumed a typhoidal nature between the seventh and tenth days, with never a succession of symptoms following a prodromatic stage, nor a gradation of temperature record. Generally ended, during third or fourth week, in a flattering convalescence, or died, by a complete surrender of the system to the dread disease, often after a severe hæmorrhage from the bowels.

Symptoms.—Onset very sudden; often patient after having retired perfectly well or with a slight headache was aroused in the night with severe nausea and vomiting, or with nausea alone; high fever 103° to 105° ; sweating and a general sense of illness. In one or two cases attack began with a chill; tenderness over the stomach; constipation was the rule, though several began and continued with a diarrhœa of dark-green offensive stools; in two cases epistaxis occurred; in one, alarming depression with high fever; temperature record in many of the cases varied very little with the diurnal changes; eyes injected; pulse full and quick; respiration not in proportion to rise and fall of the pulse or varied by changes of temperature; no tympanites at first, but very prominent in many of the cases when the fever assumed the continuous or typhoid nature; nervous symptoms; intellectual lassitude; delirium occurred most frequently during the first three or four days, and in one case the patient was unconscious most of the time up to the third day after a violent onset. Some of these symptoms, along with a peculiar pallor, gave the patient, from the beginning, the appearance of being very ill. Of course no one case exhibited all of the above symptoms, but every case conformed to a train of symptoms as classed above, either in a mild or exaggerated form.

Prognosis.—It was very unfavorable on account of the tendency to intestinal hæmorrhage, especially in cases having a violent onset.

To some this general description of cases may seem an exaggeration of true typhoid with rapid onset, yet to see as I did, four cases in one house and three in another, with the same furor of attack, is proof enough for me that it was no simple typhoid, but a typhoid dependent upon and intensified by certain atmospheric or telluric conditions peculiar to the mountainous district.

It is not my purpose to try and set right the nomenclature of the different fevers, but to insist in giving an insight into some of the atypical forms of the well-known disease.

That we have typhoid fever exhibiting peculiar symptoms in the beginning is no less a fact than that we must recognize them and be prepared to meet their ultimate tendency. To obviate what might be a calamity to the patient and a reproach to the physician, we must know these peculiarities. That they have a malarial or sometimes almost a pernicious onset is true, but their tendency is typhoidal, and are to be recognized as such unless they occur in a section that is known to be malarious.

You may in the beginning confound two essentially different diseases—typhoid and remittent fever—a most unfortunate affair, as their pathology and treatment are entirely different, and a timely knowledge of this may save many lives.

While it is true that fevers do not require much medication, it is also true that they do not all require the same treatment. This is taught us, if in no other way, by the distinctive and essential difference of pathology; for, in other fevers, Peyers' patches may or may not be affected, while in typhoid, this is the chief seat of the lesion. In the former, we use systematic and symptomatic treatment, while in the latter it is chiefly expectant. You may abort other forms of fever, but, though Osler and others say to the contrary, I do not believe that typhoid can be aborted. The treatment of one necessarily omits the indications in

the other; that is, to infringe upon the premises of Peyer's patches from third to fourth day, would, in my mind, be bad therapy, while in other fevers, from first to tenth day, the bowels, liver and accessory organs require special attention. It fell to my lot to be called in consultation in a case where the symptoms had misled the doctor with fatal effect.

In this study of sixteen cases, I cannot believe them true typhoid; that is, as we see it described in text books, but a typhoid influenced by both bilious and malarial conditions. Osler says that malaria is becoming uncommon on the Atlantic coast. I think rather that it is insinuating itself into other fevers, and thereby losing some of its identity.

All of the sixteen cases occurred from one to four miles from a river which is subject to heavy overflows, but out of the reach of swamps or marshes; spring water was used for drinking purposes in every case. Neither the geographical nor telluric conditions would justify me in saying that that country is malarious, at an altitude of 1,400 feet, with good drainage, no low marshy districts, vegetable growth scanty, and no place to encourage the presence of this "small plasmodium," except probably bad hygiene around the houses. The soil is porous and free from decomposed vegetable matter; the ground-water is not near enough to the surface to render building sites unhygienic. The soil is of that clay-slate or granitoid formation that usually gives good slopes and renders vegetation scanty; there is very little of the chalky or marly soil that is said to render districts malarious by retaining the drainage.

Ten of these cases developed into true typhoid by the 10th day, the others never were very decided as to any special type, but did well under typhoid treatment.

Treatment.—I usually began by giving stimulant doses of calomel, if seen in the first stages; milk diet; stimulants in the form of milk toddies; cooling drinks; diarrhoea seldom needed attention; used three grain doses of salol twice a day, sponging to reduce fever, when very high, but found a combination of three-grain phenacetine and two-grain ace-

tanilid three times a day would control the fever very well. Then dry tongue and bilious appearance marked the case, I gave muriatic acid or dilute nitro-muriatic acid in full doses; in all the cases, quinine was contra-indicated on account of cerebral symptoms; then I gave very small doses of morphia with good effect. Intestinal hæmorrhage occurred in four or five cases, in fact, it was so common, that some of my neighbor doctors expressed themselves so much in dread of this unfortunate turn, that they went prepared for internal and external hæmorrhages.

Taking these cases as a whole or separately, they cannot be deprived of their similarity to other fevers, nor can they be classed as a distinct disease with characteristics peculiar to itself, having its origin in mountainous districts, but a typhoid fever with an atypical onset, depending upon some atmospheric or telluric phenomena peculiar to that section for its irregular manifestations, and rendered more liable to intestinal hæmorrhage by its sudden furor of attacks and continued high temperature.

Clinical Reports.

"The Modern Treatment of Sprained Ankle."

By W. K. GATEWOOD, M. D., of West Point, Va.

I was very much impressed by an article by Dr. V. P. Gibney, of New York, in the January number of the *Poly-clinic*, on the treatment of sprained ankles.

On July 18th, 1893, I had a fine subject on which to try the plan described, and my success was magical and perfect.

A young lady with low quarter shoes jumped out of a buggy and sprained the left ankle very badly. I saw her three hours after it happened, and her ankle and foot were dreadfully swollen and very painful. I ordered the application of hot water and hot fomentations, which were kept up continuously. The pain, however, was so bad that I had to inject one-fourth grain morphia sulphate at bed

time. The fomentations were continued all next day (Saturday.)

Sunday, about noon, I visited her, and found her leg, ankle and foot very much reduced in size, but still so very painful that I determined to try my straps and bandages. Armed with a roll of rubber adhesive plaster, one inch wide, I began to strap my patient's limb in the following manner: My first strip began at the inner side of the heel, crossed the foot obliquely, and ended under the foot at the base of the little toe. My next strip began at the outer side of the heel, crossed the foot and other strap, and ended at the base of the big toe under the foot. I then continued this strapping, overlapping about one-fourth inch each previous strap, until I had the whole foot, ankle and lower part of her leg completely enveloped. I then applied a cheese cloth bandage over the whole to make the plaster adhere more closely, and prevent the stocking from sticking to it. I then had her stocking and an old shoe put on and well laced up, and told her to get up and walk. There were half a dozen ladies in the room at the time, and I think they all thought I was crazy; for ten minutes before the foot could not be moved without my patient screaming. I insisted upon her getting up, and she did so. I told her to walk across the room and back which she did without even limping. I then told her to dress and go where she wanted to. On Tuesday she went home, the sprain giving her no more trouble. I told her to wear the straps for three weeks, and then remove two every day until all were off.

This treatment was so entirely successful and satisfactory, that I hope all of my brother doctors will try it, for I am sure they will be pleased with the result.

Bromidia.

Dr. T. H. J. Pryce, 4 Lorne Villas, Clevedon, Somerset, Eng., writes: "A patient, age 28, suffering from pneumonia and typhoid blood poisoning (the latter contracted when convalescing), complained of insomnia. When in good health, he had suffered more or less from insomnia, but after having taken bromidia he slept naturally, and no headache or constipation followed its use, as was the case when other narcotics were administered. I was very much pleased with the results, and prescribe bromidia often now."

Analyses. Selections, etc.

Chopparro Amargoso—A New Treatment for Chronic Dysentery.

Dr. J. W. Mixon, of Wrightsboro, Texas, says (*Texas Sanitarian*, August, 1893,) that Osler, Dock, Steingel, Eichberg, and many others, ascribe dysentery (both acute and chronic) as due to the presence of the *amœba coli*. The *amœba coli* is also present in all cases of hepatic abscess following dysentery.

Chopparro amargoso is a small thorny bush, which grows in Southwest Texas in thin mesquite land, classed in its natural order—*Simarubacæ* (same order as quassia and simaruba). All parts of the bush possess medicinal virtue (except old stock). "*Todos es bueno*" root is the name used by the natives. The bark, leaves, thorn, flowers (pink) and fruit (cherry-red when ripe), all have the characteristic and intensely bitter taste. The tendrils, which possess the most active principle, is the part generally selected. It yields its virtues to boiling water (two to four ounces to the gallon of water for the decoction), requiring about two hours. Messrs. Sharpe & Dohme, of Baltimore, made, at his request, a fluid extract, the dose of which is min. x to ʒss as a tonic; ʒiij to ʒj as a stimulant. The active properties in this drug are due mostly to a bitter principle, an alkaloid, which has not been isolated. Although *chopparro amargoso* is so intensely bitter, it seldom produces nausea, but acts as a palliative to the whole alimentary canal. This bitter may be overcome, to some extent, by skillful pharmacal manipulation.

Two years ago, his attention was called to *chopparro amargoso* by Dr. Champion, of Luling, Texas. He said it was a Mexican domestic remedy of great repute in the treatment of bowel troubles, especially adapted to chronic dysentery, the most intractable form. It seems to remove the dysenteric symptoms.

In large doses of fluid extract, ʒiij to ʒj, the effect is that of a diffusible stimulant. The face flushes, head feels a little full, with no ill effects following. The toxic dose, if any, has not yet been ascertained. The drug does not purge—neither does it constipate the bowels if taken in health. It is principally eliminated by the kidney, as the odor can be detected in the urine, though it has no observable effect on the kidneys. When given in dysentery, it acts as palliative, but not as an anodyne like opium. It has some anti-peri-

odic properties, which might be a desirable feature in the treatment of malarial dysentery. It may be of service in typhoid fever as an intestinal germicide and tonic; it might also be useful in dipsomania on account of its stimulating effects.

He reports a few cases treated with this remedy, to give some idea of its value, and then concludes:

"I could report many other cases successfully treated by myself and others, but deem the above sufficient to show that, in my opinion, we have in this native drug a valuable remedy for dysentery.

"It is said that General Taylor's army, on their return from the invasion of Mexico, in 1846, contracted "camp-flux," owing to bad hygienic surroundings, which proved very intractable to regular treatment; they were induced by Mexicans to try *chopparro amargosa*, which proved to be very effective in arresting the disease."

Movable Kidney, and Some of its Symptoms.

Dr. Samuel Ayres, of Pittsburg, Pa., read a valuable paper last May on this subject (*Proceed. Med. Soc. State Pa.*, 1893, pages 140-45). Rayer, in 1839, brought the matter clinically before the profession; but until the present improved operation of nephrorrhaphy, nearly all means for relief were unavailing; hence little study was given the subject. Recently, however, Lindner, Landau, Keen, Litten, Edebohls, Keppler, Schmitt, Newman, Hahn, and others, have added extensive and valuable literature on the subject.

Movable kidney is to be differentiated from *floating kidney*—the *former* meaning that the organ is freely movable within or out of its fatty capsule for a distance of from two to eight inches or more from its normal position; the *latter* is generally congenital, and within the peritoneal cavity, and has a mesonephron formed by a reduplication of peritoneum. Notwithstanding this distinction, both are probably attended by similar symptoms.

Movable kidney is much more common than was formerly supposed. Only 11 cases were noted in 11,000 autopsies quoted by Newman, and Skorszewsky found only 32 cases in 1,030 women. But Edebohls (*Amer. Jour. Med. Sci.*, Vol. 105, Nos. 3 and 4), in 500 women examined, found it in 90, or 18 per cent.—generally on the right side. Lindner found it in 1 of every 5 or 6 women examined.

Among the effects of movable kidney are traction upon

the renal nerves and vessels, general dragging upon the sympathetic nerves and their ganglia—exciting reflex irritation—undue pressure on the bowel or other parts with which it may be in contact, etc. If the kidney becomes incarcerated or twisted, so that the circulation or outflow be obstructed, hydronephrosis may supervene. It is reasonable to suppose that the liver, and especially the pelvic organs, have been often unjustly accused. In fact, the effects of displaced kidney closely resemble those of pelvic disease, and can often be differentiated only by the results of operation. Hence, in every investigation of the pelvic or abdominal organs, the position of the kidney should be carefully ascertained.

Edebohls summarizes six leading *symptoms* of movable kidney in uncomplicated cases: 1. Chronic digestive disturbances; 2. General nervousness; 3. Epigastric pain, usually somewhat to the left of the median line, at or near the free border of the left costal cartilages; 4. Cardiac palpitation; 5. Inability to feel comfortable; or, 6, to sleep on the left side.

Dr. Ayres found, in addition, decided spinal pain, great dragging and aching and sense of weight just below the free border of the ribs on the side corresponding to the prolapsed kidney, coccygodynia, severe periodical attacks of pain in the region of the kidney, periods of mental depression, sense of great fatigue and tire in the lower extremities after the least exertion, nervous prostration, constipation, etc.

Causes.—Some think movable kidney chiefly due to absorption of peri-renal fat; though sometimes the normal amount of adipose tissue still remains. Lean persons with lax abdominal walls, and child-bearing, are potent predisposing causes. Traumatisms from falls, strains, etc., are doubtless leading factors in the etiology. One of Dr. Ayres' cases dated from an attack of typhoid fever.

Diagnosis is not difficult, since movable kidney is commonly found in thin women with relaxed abdominal walls. Place the patient supine upon an operating chair, with the plane inclined about 30° from the horizontal. With legs flexed, the mobile kidney will slightly descend by gravity from its normal position; then by deep upward pressure from behind just below the border of the last rib, with the fingers of the left hand, if examining the right kidney, and counter-pressure over the front and side of the abdomen just opposite, there will be little difficulty in outlining the

organ, etc. Occasionally the kidney slips up so high under the liver that it is not easily dislodged. If now the patient deeply inspires and holds her breath a moment, the kidney will descend, and may be felt to slip back between the fingers of the two hands during expiration, or by slightly relaxing the pressure. Some advise for examination that the patient sit on the edge of a chair, leaning forward, with the hands resting on her knees.

Prognosis quite unfavorable without operation. True, temporary benefit may be obtained by belts, compresses, or pads.

Treatment.—Nephrorrhaphy, or fixation by suture of the kidney to the abdominal wall offers the only permanent relief. The mortality from the operation is less than 3 per cent. The percentage of recoveries from symptoms varies from 60 to 90. But do not hastily or rashly undertake the operation. Movable kidney is not equally disturbing to all who have it—indeed, in some persons it produces no symptoms. Where movable kidney is complicated with various pelvic lesions, these should be first cured, and sufficient time allowed to estimate whether the movable kidney is the disturbing element.

Method of Bringing Down the Arms After Version.

Magnus recommends a new method of bringing down the arms after version and delivery of the trunk, which should not be brought down too far before delivery of the arms. When these are about the neck, the hand should be introduced in the ordinary manner, two or three fingers being placed on the superior edge of the scapula, which is gently pressed downward. This will cause the arms to move suddenly and to come down without any further help. Others besides the author have successfully made use of this method.—*Ugeskrift for Læger*, 1893, p. 62.—*Univ. Med. Jour.*, July, 1893.

Heart Disease, or Kidney Disease?

Dr. James Tyson, of Philadelphia, details (*Proceed. Med. Soc. State of Pa.*, 1893,) the histories of some cases showing the combination of symptoms sometimes encountered which make it difficult at first sight to recognize whether a given case be one of heart disease or kidney disease. He then recapitulates certain points which aid in the *diagnosis between mitral disease, chronic parenchymatous nephritis*, and the last

stage of chronic interstitial nephritis, when the urine, from having been copious and light-hued, becomes scanty and dark-hued, because of failing cardiac power.

CHRONIC PARENCHYMATOUS NEPHRITIS	CHRONIC INTERSTITIAL NEPHRITIS. (LAST STAGES.)	MITRAL DISEASE.
Urine scanty and high colored; high specific gravity; highly albuminous.	Urine, though scanty, is still light-hued, and has low specific gravity; moderately or slightly albuminous.	Urine scanty and high colored; high specific gravity; moderately or slightly albuminous; rarely highly albuminous.
Numerous granular, dark granular, or fatty casts.	Few casts and these hyaline or slightly granular. Often no casts.	Few casts, hyaline, or slightly granular.
Much dropsy.	Little dropsy as a rule, though when heart fails dropsy may be marked.	Much dropsy; effusion into serous sacs.
No mitral systolic murmur.	No mitral murmur.	Mitral murmur.
As a rule, no hypertrophy of left ventricle, which may, however, be present at times.	Always marked hypertrophy of left ventricle, except in persons feeble and cachectic at the outset; this without aortic murmur.	Moderate hypertrophy of left ventricle; hypertrophy of right ventricle.
No enlargement of liver.	No enlargement of liver.	Enlarged and tender liver.
No signs or symptoms of arterio-capillary fibrosis.	Symptoms and signs of arterio-capillary fibrosis may be present.	No arterio-capillary fibrosis.
No retinitis albuminurica.	Retinitis albuminurica may be present.	No retinitis albuminurica.
No history of gout.	History of gout, lead-poisoning, or free eating and drinking.	Seldom a history of gout, alcoholism, or free eating and drinking.
Seldom a history of rheumatism; more frequent of infectious disease.	No history of rheumatism or infectious disease.	Probable history of rheumatism or infectious disease.
Uremia infrequent.	Uræmia frequent.	No uræmia.
Partial response to treatment.	Doubtful response to treatment.	Generally prompt response to treatment.

These points of diagnosis refer more particularly to uncomplicated cases. With complicated cases the difficulty is greatly increased, and the decision must be one of probabilities. A fact of great value in favor of a primary and advanced kidney disease is the failure of heart tonics like digitalis to produce diuresis, even though the pulse-rate is decidedly reduced by the action of the remedy.

The practical bearing of these considerations is not so

much in the direction of therapeutics as in that of prognosis; for the treatment of these conditions is essentially the same. In the matter of prognosis, however, it is of the extreme importance; for in cases of pure mitral disease, not too far advanced, the most favorable prognosis may be given. In the stage of renal disease under consideration, however, and in the combined form with actual structural change in both heart and kidney, the prognosis is very unfavorable; and to make the one condition for the other, and to prognosticate accordingly, may seriously jeopardize one's reputation.

Glycerine in Nephrolithiasis.

Besides piperazine, which is the best known solvent of concretions of uric acid and its salts, glycerine has attracted attention in recent literature as a remedy in nephrolithiasis. Upon the administration of fifty to one hundred cubic centimeters of glycerine, concretions to the size of a bean have been observed to pass away with the urine in patients suffering from nephrolithiasis fourteen to fifteen hours after taking the drug, the urine also containing a remarkable amount of mucus. Two or three hours after the drug has been taken, pains occur with great regularity in the region of the suspected kidney. In order to explain this action of glycerine, A. Hermann has made experiments, which have been published in the *Prag. Med. Wochen.*, from which the following may be deduced:

The largest part of the glycerine, taken internally, is excreted unchanged within the next twenty hours with the urine, and the latter is neither quantitatively nor qualitatively changed, excepting that it becomes slippery. The solving power of glycerine for concretions is extremely small, even at the boiling point. When introduced into the ureter of rabbits by abdominal section, no contraction of the involuntary muscular fibres of the urinary passages takes place. When administered to excess, per os, similar symptoms occur as are observed when a saturated solution of sodium chloride is injected into the veins. The action of the drug can, therefore, only be a mechanical one. Glycerine, after entering the blood, withdraws a large amount of water from the tissues, which passes through the kidneys; the mucus in the uriniferous tubules shrinks in consequence of the withdrawal of water by the glycerine, and is thereby loosened, and with the concretions washed away by the slippery urine.—*Med. Review*, Aug. 19.

Treatment of Epilepsy.

Dr. David Inglis, Professor of Nervous Diseases in the Detroit College of Medicine, has a paper in *Therapeutic Gazette* of great practical interest. He remarks with reference to epilepsy, that in no form of nervous disease do routine methods of treatment more uniformly prevail. The particular routine treatment is that by bromides. After quoting from popular authorities who base all hope in bromides, he continues:

The general practitioner, then, is well justified in going straight on with the bromides; and yet I venture the assertion that the routine use of the bromides has been as disastrous to many patients as the unchecked progress of their epilepsy could have been. I believe, further, that the bromides, as commonly used, are even worse than the disease. No one has died suddenly of bromide poisoning, but that the bromides have toxic effects is, unfortunately, too evident.

To illustrate: On December 30, 1891, I was consulted by J. K., aged thirty years, of excellent physical development and undoubted good habits of life. In February, 1887, the first convulsion occurred, followed at long intervals by three others. Three years ago, however, he began to have periods of transient unconsciousness, during which his conduct was irrational, and he certainly had delusions, evidently attacks of *petit mal*. These occurred with varying frequency for three years, but steadily increased in number until, when he came under my care, he was having them every day, and often several times a day. When he came to me he had almost complete loss of sexual power. His memory was utterly unreliable and his mental processes sluggish. He had been steadily under treatment of the bromides first, last, and all the time. When the loss of memory had become so profound he went to Chicago, and was told by his physician to continue the same bromide mixture. The patient was tormented by profuse or, as he termed them, "drowning" night-sweats and nocturnal tremor.

The case seemed to me one of "marked toxic effect" of bromides. The patient was ordered to stop bromides absolutely, put upon atropine $\frac{1}{120}$ grain t. i. d., and given 3 grains of chloral hydrate at bedtime. Ten days later I noted "no spell in last eight days"; "no night-sweats." This plan was continued until the end of March, when quinine in tonic doses was added. Attacks of *petit mal*

recurred at intervals of from six to ten days. The treatment, varied to suit the exigencies, consisted essentially in atropine and tonics, but no bromides, except on one occasion, when potassium bromide, 15 grains, and chloral, 5 grains, were given for a few doses to control headache. Fluid extract of *cimicifuga* had no effect on the attacks of *petit mal*, but caused severe headaches.

In July, 1891, seven months after he began treatment, I first put him upon *antifebrin*. Up to this time the *petit mal* kept along with a frequency much less, to be sure, than while he was saturated with bromides, but still discouraging in their persistence, about once a week.

The subsequent course of the affair was much more gratifying. The intervals began to grow longer, the memory to return decidedly, and the patient has had no spell since November 21, 1891. He has resumed full control and responsibility in his business; his memory is perfect, except that there is a period in his life (that of bromide intoxication) of which he has no recollection. The treatment has been that started nearly two years ago—that is to say, he has kept up steadily either *antifebrin* alone or with phenacetin. He now takes a small dose of *antifebrin* and phenacetin twice a day.

Such a case demonstrates two things: first, that bromides have "marked toxic effects," and, second, that medical therapeutics are as efficient as surgical.

Here is another: Young married man, aged thirty; foreman in a mill; of good habits and good heredity; began by having an epileptic convulsion in bed, October 21, 1888. He had been felled by the blow of an axe upon his forehead twelve years before the first fit. He had also "lived with a headache in both temples" for some three years before the first fit. The convulsions recurred at intervals varying from ten to four months. Here, again, as in the last case, attacks of *petit mal* came on, during which the patient wandered off to considerable distances, the unconsciousness evidently lasting half an hour or more. The mental failure, although not so profound as in the first case described, was cause of concern. An abundant bromide acne corroborated the patient's account of steady use of bromides, and the progressive frequency of the spells showed the inefficiency of the routine treatment.

The bromides were at once discontinued, and patient put upon arsenic and fluid extract of *cimicifuga* with considerable benefit, due, as I now believe, chiefly to cessation of bromides.

In August, 1891, he was put upon phenacetin and salol, after which the improvement became well marked. I lost track of him until March 6, 1893, when he turned up again with this history. He had kept himself supplied with his capsules, and had gone some eighteen months without a severe convulsion, and with only a rare and very transient spell of *petit mal*, so that he became confident, stopped medication, and a day or two before he came to see me had a fit. He is now ready to go on with his phenacetin.

The case, while not as marked an illustration of the ill effect of bromides as No. 1, shows this: That fully as good results were obtained by antifebrin and phenacetin as the most ardent supporter of the bromide plan would claim.

In August, 1892, a young business man was referred to me. He gave a history of having been obliged to abandon business, of having spent \$2,400 in a long visit to California in search of health, and returned to Detroit, both himself and friends utterly discouraged.

He had frequent epileptic attacks, as many as three a day, during which he became wholly unconscious. In falling he fell forward, and the right side stiffened more than the left.

The most serious phase of his trouble, however, was his mental state. He had become forgetful and mentally inert to a degree which quite precluded him from attending to his business. Besides this, he was becoming ugly, so that his wife needed to avoid crossing him in any way. Corresponding with this mental state, his facial expression was almost *nil*; ptosis well marked; face suffused. The man's whole appearance and demeanor, his mode of speech and gait, as well as the history given, joined to make a complete picture of a nervous system rapidly degenerating. The prognosis was given as very doubtful. A feature in the case, of which the patient himself made more complaint than of anything else, was a troublesome dyspepsia.

He brought a history, as usual, of bromides and also iodides. What is the result to-day? I received a check from him on May 5, 1893, and on the back of the bill this pleasant endorsement: "I'm too busy to come and see you, but am able to sign checks." In brief, the young man is hard at work in his old business; has set up housekeeping; his facial expression is that of an active, interested man; he has had no convulsion since September, 1892.

Guided by previous experience, he was ordered at my first visit to discontinue his bromides, and was put upon

salol and phenacetin, which he has continued in lessened doses up to the present time, although now he takes a capsule only at irregular times. He judges by his own sensations: a headache, a fulness over the eyes, or a little increase of nervous irritability, he takes a few capsules.

I have given these cases because in each one a long enough trial has been made to demonstrate that the action of these drugs is permanently beneficial, and also to demonstrate that the steady continuance of the drug is not harmful. There is no such wretched effect upon the mental state as is produced by the bromides.

I could add to the list many cases in which I have given these drugs for shorter periods. These cases might not satisfy my hearers. At the same time, this experience has satisfied me thoroughly of the practical efficiency of antifebrin and its analogues. One case will illustrate the grounds of my belief.

Mrs. K. T. was referred to me by Dr. J. H. Carstens. She had been sent to him in the hope that her epilepsy could be cured by removal of her ovaries. Dr. Carstens refused to operate. The fits had been going on for fourteen years. When she came to me she had attacks of *petit mal* from one to three times a day. This case was at once put upon antifebrin and phenacetin. Improvement was prompt. She remained in the city some six weeks, and then felt so much better that she returned home and resumed her domestic activities. The last report I had from her was that she was well, except that about once a month she still had an instantaneous "flash of unconsciousness."

To sum up: I believe that the routine use of bromides does serious harm. That it is a serious mistake to go doggedly on with bromides in any case in which the attacks of *grand mal*, but more especially of *petit mal*, persist or increase in frequency while the patient is taking bromides.

I believe that bromides should be given in full doses to begin with, so that if they are to prove of benefit in a given case the good effect will be promptly shown. The dose should then be diminished, and always carefully watched. Fallure of memory, mental torpor, change of character, are worse things than an occasional nervous explosion, and when the toxic effects of the bromides first appear, the use of the drug ought to be stopped at once.

I believe that we have in antifebrin and its analogues a group of remedies which form efficient substitutes for the bromides. They can be given for long periods with marked

benefit, and their use is without any deleterious effect upon the mental state. This alone gives them an immense advantage over the bromides. One precaution, however, must be observed. The drugs need not be given in large doses, but there are persons on whose circulatory apparatus even moderate doses exercise a depressing effect. Such cases are not fit for the antifebrin treatment.

That the antifebrin group has a profound power over the cerebro-spinal axis is demonstrated by the effect which we so well know upon reducing temperature. My experience with this class of remedies in diabetes has corroborated my reliance upon them, and certainly the experience upon which this paper is based goes far to prove that prompt and thoroughly satisfactory effects in controlling the epileptic explosion can be expected.

Salol as an Intestinal Antiseptic.

E. Mansel Sympson, M. D., B. C. Cantab., M. R. C. S., Surgeon to the Lincoln County Hospital, says (*Practitioner* Aug., 1893), that the action of salol in the human body is briefly as follows: After having been swallowed and passed through the stomach unchanged, it is split up in the duodenum by the pancreatic juice into its constituents, salicylic acid and carbolic acid. They are thrown out of the body partly by the kidneys (the urine not infrequently being blackened by the carbolic acid) and partly by the intestinal tract in the feces. From experiments on dogs whose pancreases have been extirpated, there seems to be reason to think that salol can be absorbed from the intestine without the intervention of the pancreatic juice. As to its action on digestion, some authorities say that it unsettles the digestive processes, and actually sets up gastric trouble—these statements refer to its action in typhoid fever. Other observers have, however, noted directly the contrary results. I have personally taken salol in five-grain doses three or four times a day, both before and after meals, when I have been perfectly well, without experiencing the slightest interference with digestion or appetite. The following experiments will show, however, that salol does appreciably affect the different digestive ferments so far as regards their rate of action.

Experiment I.—Ten grains of arrowroot were boiled in two ounces of distilled water, cooled down to 100° F., and ten minims of Bleasdale's pancreatic essence added. The solution became perfectly clear. When one grain of salol was added before boiling, the starch required twice the

amount of pancreatic essence, and an hour's more time (being kept at the same temperature), before the conversion was complete. If the salol was merely added with the essence, it made no difference. The same results followed, only less marked, from the use of half a grain of salol.

Experiment II.—Five grains of boiled and finely chopped-up white of egg were pounded up with the following mixture: Benger's liquor pepticus twenty minims, dilute hydrochloric acid ten minims, and two ounces of distilled water. For four hours this mixture was kept at a temperature of 100° F. The albumen had entirely disappeared, and the mixture gave evidence of containing peptones. The addition of half a grain of salol checked the process considerably; at the end of the same time there were several fragments of egg undissolved, and two or more hours were required for complete dissolution. Both these sets of experiments were frequently repeated, and the results were distinct and constant. Similar experiments made with salicylate of sodium, showed that this drug had no action in pancreatic digestion, but about the same as salol in peptic digestion.

Salol has been accused of producing herpes, and of increasing the delirium which frequently occurs in the course of typhoid fever. I have not noticed this latter either in that complaint or when I have used salol in cystitis.

In normal digestion, the semi-digested acid chyme is poured out from the pylorus into the small intestine, to be exposed to the influence of the bile and pancreatic juice. These complete the digestion of the various food-stuffs, and some of the products of this digestion are due to the micro-organisms which are present in the intestine. Their work seems to be modified or kept in check by the presence of bile, for, as Foster remarks, "Bile possesses some antiseptic qualities. Out of the body its presence hinders various putrefactive processes; and when it is prevented from flowing into the alimentary canal, the contents of the intestine undergo changes different from those which take place under normal conditions, and leading to the appearance of various products, especially of ill-smelling gases."

The stomach undoubtedly is responsible for some cases of dyspepsia, where the chyme is passed on to the intestines in an imperfectly prepared manner, which produces duodenal disorder. But in the following class of cases, we have evidence that occasionally the secretions poured into the intestine are at fault. The patient is probably of a "bilious"

temperament; he may have a clean tongue with great loss of appetite, and consequent loss of flesh; no pain during a meal, but coming on about two and a half to three hours after. Very likely he is constipated, and when his bowels are relaxed, the motion is greyish white. As a rule, he will not suffer from nausea, only a little retching sometimes; and instead of the gas being acid, as it so often is, it may be quite alkaline and "soapy." The seat of pain is the lower part of the abdomen, and is relieved by passing wind. There will perhaps be a slight yellowness, hardly amounting to actual jaundice. These cases belong to the class of duodenal indigestion. The symptoms are due to excessive and faulty fermentation in the small intestine owing to alteration in character and amount of the ordinary digestive fluids, and more particularly of the bile. I have given dilute nitrohydrochloric acid to these patients, sometimes combined with liquor pepticus, to help the stomach to do its work properly; but it has made little or no difference in their condition. And opium in any form by the mouth has not given that speedy relief which it does in gastric affections. So, latterly, I have been in the habit of beginning with four or five grains of calomel, and following it in an hour or two with ten-grain doses of salol every four hours. This, to use the language of a somewhat enthusiastic patient, "acts like a charm," when taken about one and a half hours after meals. The pain ceases, the swelling of the abdomen does not appear, the appetite improves, and, more important still, the wasting (due, I presume, to the non-digestion of a large part of the food) departs.

Another complaint wherein salol is exceedingly useful is a form of infective diarrhœa. I saw a family who all had diarrhœa, passing dark-brown watery stools five, six, seven, or eight times in the twenty-four hours, attended with severe abdominal pains. In a few days, several of the inhabitants of the village were seized with the same complaint, and every one had been in the first-mentioned house. Several more got it from the second source of infection. Opium alone was far inferior to that of salol, whether combined with opiates or not.

In cases of ordinary diarrhœa, too, there are few remedies which more speedily check the flow and the pain than ten-grain doses of salol. Some years ago, in the *Lancet*, I advocated giving glycerine of borax in the diarrhœa of infants, believing that undue fermentation in the intestines was the *fons et origo mali*. It does answer well, as I have over and

over again seen; but I prefer, in the severer cases, to use salol in doses proportionate to age, as being a little more certain, more antiseptic, and almost as agreeable to take.

Lastly, I have been using salol exclusively in typhoid fever, not so much on the idea of combating the specific poison, but of cleaning and keeping clean the intestinal tract, and so subduing the irritation of the glands of Peyer's patches and other ulcers there, and that caused by the secretion from these ulcers in the intestine. Salol also prevents the excessive formation of wind, which is sometimes so vexatious a trouble to the patient. Salol brings the temperature down generally one or two degrees, causes abundant perspiration (this can be readily combated by giving oxide of zinc, tincture of belladonna, and some quinine in a mixture), reduces the number of stools from twelve or fourteen in the twenty-four hours to three or four, and when they are offensive, deprives them of any odor whatever. No bad effects were noticed with regard to its action in producing delirium. Its use was continued in typhoid fever for about a week after the disappearance of diarrhœa. It was always given in ten-grain doses suspended by means of compound tragacanth powder, at first (in typhoid fever and other complaints), every four hours, then every six, and for the last week three times a day. It was always given after food.

Study of Addison's Disease and of the Adrenals.

Dr. W. Gilman Thompson, New York, (paper presented *Assn. Amer. Physicians*, June 1, 1893,) undertook researches with a view of formulating such conclusions in regard to the etiology and symptomatology of Addison's disease as the still limited knowledge of the subject justifies. His personal experience includes three cases with autopsies. To these are added three more from the statistics of the New York and Presbyterian Hospitals. In addition, he has collected unreported records of 40 autopsies, in which lesions of the adrenals have been noted, but without accompanying symptoms of Addison's disease. His conclusions are drawn from the total of 757 cases recorded by many different observers. Autopsies were made in nearly all.

We are obliged to abandon the earlier theory that Addison's disease is absolutely dependent upon adrenal lesion, in view of the fact that many typical cases have lately been observed with well marked bronzing, in which the adrenal bodies were entirely abnormal. Among Lewin's histories,

twelve per cent. were of this type. Virchow describes a typical case, with pigmentation, in which the microscopic examination of both the adrenals and sympathetic system presented nothing abnormal. Moreover, it is absolutely established that every variety of adrenal lesion which has ever been found associated with Addison's disease has also occurred without giving rise to any symptoms whatever. A most instructive case is related by Jürgens, where the pressure of a large aneurism caused atrophy and degeneration of the left splanchnic nerve, with typical bronzing and other symptoms of Addison's disease, whereas the adrenals remained normal.

The conclusions which the study of these cases seem to justify are: (1) That Addison's disease is a condition arising from and dependent upon irritation of the abdominal sympathetic nerves through lesions of themselves, their ganglia, or diseased supra-renal capsules. (2) In the great majority of instances (fully eighty per cent.), the disease originates as a secondary or primary tuberculosis of the adrenals, and the sympathetic system is either involved by extension of the pathological process, or is functionally disturbed and irritated through the intimate anatomical connection existing between the adrenals and the relatively large number of nerves which they contain. (3) Actual lesion of the sympathetic system, which is far more common than heretofore supposed, is not necessary to produce the varied symptomatic phenomena of the disease. Functional disorder through irritation conveyed from the adrenals may sometimes cause all the symptoms, just as in chorea and many of the conditions of aggravated hysteria and other functional nervous disorders we are often unable to find definite lesions. (4) In a certain proportion of cases (not over twenty per cent.), the adrenals are affected by some other lesions than those of tuberculosis, or else they remain normal (in twelve per cent.), and the sympathetic nerves and ganglia are alone diseased. Dr. Thompson then gave the results of his inoculation and other experiments upon the adrenals, which he has been carrying on at the Loomis Laboratory in the past four months.

Dr. Welch, of Baltimore, did not think it possible to draw any other conclusion than had been drawn by Dr. Thompson from his record of cases. He had seen six cases of Addison's disease, all associated with the characteristic tuberculous lesion of the adrenals; and in two of these tubercle bacilli were found, but only after a long search. In these cases, the tuberculous lesions had an unusual localization.

In one case, there was tubercular deposit in the bodies of nearly all of the vertebræ. In another case, there were tuberculous lesions in the mesenteric glands and in the genital tract, but nowhere else in the body. Tuberculous lesions associated with Addison's disease are often peculiar in localization. A few months ago, a negro came to autopsy at the Johns Hopkins Hospital, and tuberculous disease of both of his adrenals were found. There had been no suspicion of the existence of Addison's disease. The mucous membranes were carefully examined, and abundant dark pigmentation of the mucous membrane of the gum and of the side and back of the tongue was found. The mucous membrane of the gums and of the tongue of the negro was very often pigmented in health, much more frequently than in white people. It was an interesting question as to how a diagnosis was to be made in the negro.

Dr. J. T. Whittaker, of Cincinnati, had seen two cases of Addison's disease in the past five years, both of which had shown caseous masses in the adrenals, and one evidence of tuberculosis elsewhere. The diagnosis was established by the digestive and nervous symptoms and discoloration of the skin. The discoloration of the skin occurs, not as an abnormal deposit, but as a physiological plus, and over-accumulation of pigment in places where pigment usually occurs, as in the linea alba, nipples, scrotum, and axillary region. He was surprised to learn that in so large a proportion of cases the pigmentation was not due to disease of the adrenals. Brown-Séquard's theory, recently revived, is that it is the function of the supra-renal capsules to remove the pigment from the body, and disease of these supra-renal glands destroys this power, and hence the pigment accumulates. It was a comfort to believe that the disease was caused by tuberculosis; for if it were a pure tuberculosis, it might be amenable to some relief.

Dr. Thompson desired to emphasize the interest that attaches to careful examination of the abdominal sympathetic nerves and ganglia in cases of Addison's disease, and urged those who had opportunities to make pathological examinations not to overlook this point.—*Boston Med. & Surg. Jour.*, Aug. 17, 1893.

For Chronic Subinvolution.

R_y.—Fl. ext. ergotæ..... $\tilde{3}ij$
 Potassæ iodidi..... $\tilde{3}ij$
 Dioivurnia..... $\tilde{3}vj$

M. Sig.—Dessertspoonful in water three times a day.

Wounds of the Heart.

It was formerly believed that wounds of the heart were always fatal. Recent investigations, however, show that a fair proportion of these cases is amenable to a cure. Dr. Lumniczer has reported five cases of wounds of the heart and pericardium, only one of which terminated fatally, and Dr. Peebles (*Omaha Clinic*) reports a case of bullet wound of the heart with recovery. Dr. Heine Marks (*Med. Fortnightly*) has treated two cases of stab wounds, in one of which recovery ensued in spite of the fact that examination with the finger revealed the presence of lesions of the diaphragm, pleura, pericardium, and apex of the heart. The literature contains records of many similar cases.

Notwithstanding the perfection of our methods of examination, the diagnosis of heart-wounds is still a matter of extreme difficulty. There is no pathognomonic symptom, and the diagnosis must be arrived at from an analysis of all the symptoms. Hæmorrhage, pain, frequent attacks of syncope, and the physical signs due to hæmorrhage into the pericardium, are usually found present. Dyspnœa is a less constant symptom. According to Lumniczer, the symptoms are frequently developed some time after the injury, so as to preclude an early diagnosis. The position of the wound is, of course, of great diagnostic importance. The physical signs consist in an enlargement of the area of cardiac dullness, the existence of splashing noises accompanying the heart-sounds, the metallic character of the latter, and feeble and arrhythmic cardiac action.

The prognosis depends, to a great extent, upon the direction, location and nature of the wound. Cases in which the heart-muscle has been perforated by a needle give the best prognosis; then follow penetrating, incised, and gun-shot wounds. The worst prognosis belongs to contused wounds and rupture of the heart. Sudden death from heart injuries is due chiefly to shock, to anæmia of the brain and lungs, and to inability of the heart to contract both in consequence of the wound and the pressure of the pericardial effusion. In cases where death does not occur until the lapse of a number of days, it is usually attributable to some complicating lesion, such as an inflammation of the pericardium and less frequently of the cardiac tissues, while, if death is delayed till a more remote period, it is due to the giving way of the cicatrix or to accumulation of inflammatory products in the pericardium.

In the matter of therapeutics, a notable advance has been

made within recent times. The main indications, according to Eltner, are arrest of hæmorrhage, antiseptic occlusion, and dressing of the thoracic wound, measures directed to the general condition of the patient, and operative interference in the event of complications. Dr. Heine Marks advocates what to many might seem a hazardous procedure, but which was attended with brilliant results in one of his cases. He enlarges the wound, explores the chest cavity thoroughly with the finger, and packs it with gauze. The use of opium to secure rest and relief from pain, of stimulants to counteract shock, of cardiac sedatives to prevent excessive re-action, is too well established to require more than mention. In the treatment of complicating pericarditis and pleuritis, the aspirating needles deserve a prominent place. At any rate, the uprooting of the ancient belief, that heart-wounds are universally fatal, has given an impetus to the surgical management of these cases.—*Internat. Jour. Surg.*, Aug., 1893.

Therapeutic Uses of the Nitrites and Nitrates.

Dr. D. J. Leech remarks (*Lancet Resumé*, August, 1893,) that in considering the bearing of the pharmacological action of the nitrites on their therapeutic application there are three points worthy of note: *First*, the minute quantities which may influence the vascular system and, as a consequence, certain functions of the body. An eighth of a grain of sodium nitrite, a small but uncertain fraction of a minim of ethyl nitrite, or the sixteen-hundredth of a grain of nitro-glycerine will, in many, distinctly affect the circulation. *Second*, notwithstanding their potency, even large quantities of the nitrites and nitro-glycerine do not readily cause death. Although unpleasant, and even alarming results have been known to follow the administration of comparatively small doses, there has been, as far as I know, only one case recorded in which a fatal result has been attributed to their medicinal use. This is the more worthy of notice, since these drugs have been commonly given in serious cases. I do not know of an instance in which ethyl nitrite or sodium nitrite has proved fatal, though very large doses of the latter have been administered. Amyl nitrite has been taken by the dessertspoonful, yet recovery has, I believe, always occurred; and severe though the symptoms are which follow its inhalation, no harm has ever accrued from its employment, save in one instance, a case of phthisis, where death followed the inhalation of seven drachms.

Considerable quantities of nitro-glycerine have been taken with impunity, so far at least as concerns a fatal result; only in a few instances have very large amounts, taken accidentally or for suicidal purposes, caused death. *Third*, it is important to bear in mind the evanescence of nitrite action. When nitrites advantageously alter functions, their direct influence for good usually soon ceases; on the other hand, their evil effects are also short-lived; there is no cumulative influence. The pharmacology of the nitrites and nitro-glycerine indicates the class of cases in which these drugs will be of the most utility—namely, those in which the heart is embarrassed in its work owing to a want of due relationship between its power and the calibre of the vessels through which it transmits blood.

Laparo-Hysterotomy—Its Indications and Technique.

The paper by N. Senn, M. D., Ph. D., LL. D., etc. (*Amer. Jour. Med. Sci.*, Sept., 1893), is of such practical interest that we transfer it to our columns almost entirely.

In operative surgery, this term should be used to indicate an operation by which a fœtus or a tumor is removed from the interior of the uterus through an abdominal incision, followed by suturing of the visceral and abdominal wounds. The same operation is also applicable in the treatment of certain forms of uterine myo-fibroma, to which, of course, the old nomenclature would have no reference.

Indications.—In obstetric practice, laparo-hysterotomy will hold a permanent place. At no distant day, it will limit laparo-hystero oöphorectomy, or Porro's operation, to cases in which the uterus in itself constitutes a source of immediate or remote danger. Porro's operation is attended by a greater mortality, and it is, at the same time, a mutilating procedure; and should not be seriously considered by the conscientious practitioner unless the uterus itself is the seat of a life-threatening, removable disease. Cases have been reported in which laparo-hysterotomy was repeatedly performed with success on the same patient. In fact, I am of the opinion that second and successive operations are fraught with less immediate danger to life than the first. The modification of Porro's operation, removal of the inverted uterus by the vagina, it is hoped will be limited to the removal of a diseased uterus. Craniotomy should be limited to cases in which the physician can satisfy himself that the child is dead, and its removal *per vias naturales* is

attended by less danger to the mother than a laparo-hysterotomy. Professor Miller, of Chicago, clearly laid down the indications and contra-indications of craniotomy. When the child is dead, craniotomy is indicated, if the pelvic diameters are sufficient to admit of the extraction of a mutilated child without greater danger to the mother than would arise from delivery through an abdominal incision. The second class of cases, in which the course to be pursued is clear, are those in which the antero-posterior diameter of the pelvis is less than two inches. Here the dangers to the mother, incident to craniotomy, are as great as in delivery by laparo-hysterotomy, and there is good prospect of saving the life of the child by the latter operation. In the cases in which the shortest diameter of the pelvis is three and three-fourths inches, he regards laparo-hysterotomy and craniotomy contra-indicated, and an attempt should be made to deliver the child through the normal channel without mutilation.

The statistics of mutilating vaginal operations collected by Dr. E. P. Davis, including 1,000 cases by the ablest obstetricians, show a maternal mortality of about 8 per cent. McKelway expresses himself as follows concerning the results obtainable by laparo-hysterotomy: "I believe it fair to state that the mortality of the improved Cæsarean section done in women not exhausted by labor, and done under proper antiseptic or aseptic precautions, by skilful operators, is not over 10 per cent." I will go one step further, and make the claim that, in well-selected cases, the maternal mortality of laparo-hysterotomy is not greater than the mortality of ovariectomy in the hands of the same operators. Laparo-hysterotomy is absolutely indicated in all cases where the conjugata vera is below two and three-quarter inches, whether the child is living or dead, because the dangers incident to the mother from a craniotomy would more than overbalance the maternal risks of this operation. It is also the operation of selection when the obstruction to delivery is due to the existence of a pelvic tumor or malignant disease of the cervix.

Symphysiotomy has recently again come into prominence as a formidable competitor of laparo-hysterotomy. It is certainly to the interests of the children yet unborn that this operation is being perfected. It will add its share toward limiting craniotomy to its legitimate sphere. I fear, however, that many children will be sacrificed by substituting this operation for laparo-hysterotomy in many cases

of contracted pelvis. I am also confident that the permanent damage done to the mother is much greater than we have been led to believe by the enthusiastic reports recently published. It is difficult for me to conceive how the mechanical obstacles to delivery are to be overcome by this operation in any case in which the child is of normal size and the narrowest diameter of the pelvis is less than three inches.

Injury to the sacro-iliac synchondroses, vesico-vaginal fistulæ, incontinence of urine, an uncertain tottering gait, prolapse of the uterus, phlegmonous inflammation, caries or necrosis of the pubic bone, are some of the consequences to the mother which may follow this operation. I am, therefore, inclined to believe that this operation will be resorted to as a life saving measure to both mother and child only in cases in which there is only a slight disproportion between the size of the child and the pelvis. It is of course strictly contra-indicated in all cases in which the obstacle to a normal delivery is a pelvic tumor or malignant disease of the uterus.

A somewhat unusual indication for laparo-hysterotomy is the removal of certain tumors of the uterus. Enucleation of sub-serous myo-fibromata of the uterus through an incision in the abdominal wall is an established and well-recognized operation. This operation, however, is not applicable in cases in which the tumor is located so near the mucous membrane that by its removal by enucleation the uterine cavity is opened. The class of cases in which I wish to recommend laparo-hysterotomy is when the tumor is single, large, and projects into the uterine cavity or cervical canal; in other words, isolated, sub-mucous myo-fibroma not adapted for removal through the vagina.

Technique.—Time of Operation.—The consensus of opinion is to the effect that the best results concerning both mother and child are obtained when the operation is performed during labor. The danger from hæmorrhage and septic infection is greatly diminished by firm uterine contractions. If the operation is done during labor, it should be performed as soon as it can be determined that it is necessary. Exhaustion, resulting from protracted ineffectual labor pains, greatly adds to the immediate risks, and increases the liability to septic infection. The greatest difficulties encountered in the selection of the proper time are, of course, met with in primiparæ. The physician must often rely on his own judgment. In cases in which labor

does not progress satisfactorily, the capacity of the pelvis should be determined by a careful examination. If this shows that a living child cannot be born, a prompt decision should be made. In multiparæ, if one or more children have been previously delivered by craniotomy, it is more than probable that a laparo-hysterotomy will become necessary.

Preparations.—In all cases in which it can be done, the patient should enter a hospital several days before the expected labor. Laxatives and warm baths are important preparatory measures. The room, bed, clothing, etc., must be properly attended to. The field of operation, hands of operator and assistants, instruments, sutures, and ligatures, must be rendered aseptic. A scalpel, half a dozen hæmostatic forceps, scissors, needles, and a piece of aseptic rubber tubing, half an inch in diameter and about two feet in length, will be all that the surgeon will need. For suturing the uterine incision, a small darning needle answers. Cat-gut, silk, and silkworm-gut, and a number of aseptic towels and napkins, should be at hand. After all the antiseptic precautions have been carried out, nothing but sterilized warm water will be required during the operation. Chloroform should be used as an anæsthetic in preference to ether.

The external incision is made in the median line, commencing at a point just below the umbilicus. It should only be large enough to permit the passage of the child without tearing. It need not exceed six inches in length. The abdominal wall in the linea alba in pregnant women at the end of gestation is exceedingly thin, often not much thicker than a piece of ordinary blotting paper. Not infrequently the operator has cut through the entire thickness in making the first incision, and at the same time wounded the uterus. The first incision should only divide the skin and superficial fascia, and the remaining structures should be lifted away from the uterus and divided between two dissecting forceps, after which the incision is enlarged by cutting between two fingers.

The pregnant uterus pushes before it the intestines and omentum as it ascends from the pelvis; hence, after opening the peritoneal cavity, the only thing that can be seen is the anterior wall of the uterus. *The uterine incision* should be made in such place and in such a manner as to limit the hæmorrhage to a minimum. The uterine vessels are smallest and least numerous in the median line and away from

the cervix. The opening in the uterus should, therefore, be made in the median line, half way between the cornua, and should not extend any farther in the direction of the cervix than is absolutely necessary.

Statistics show that twenty years ago Cæsarean section, performed by horned animals, yielded better results than those done by physicians. I am inclined to believe that that difference in the mortality was largely due to the difference in the amount of blood lost and character of the wound; in the former, the opening in the uterus was made by tearing; in the latter, it was made by a clean cut with a sharp knife. Sudden loss of blood makes a more profound impression than if the same amount of blood is lost gradually. The large uterine sinuses, when divided by a sharp instrument, do not retract; consequently, spontaneous arrest of hæmorrhage occurs slowly, or not at all; but when the sinuses are torn, the lumina are blocked at least in part by torn lacerated tissue, a condition which favors the formation of a thrombus upon which depends the spontaneous arrest of bleeding.

Murdoch Cameron has introduced the use of a pessary for compressing the uterus at this stage, and this enables the operator, he claims, to cut down upon the membranes without puncturing them. I do not believe that this or any other kind of hæmostatic device is necessary before the delivery of the child, as the amount of blood lost during the time required in making the uterine incision and extraction of the child does not exceed that attending an ordinary delivery, provided the uterine opening is made quickly, and by tearing in place of cutting. An examination should be made to ascertain that the uterus is not twisted on its axis. Should this be the case, the malposition should be corrected before the visceral wound is made. The median line of the anterior uterine wall can be ascertained by observing the location of the Fallopian tubes. If these occupy the same relative position, a point half way between them will correspond to the abdominal incision. In order to limit the hæmorrhage to a minimum without any artificial hæmostatic agent, I make an incision in the median line of the uterus about six inches in length, cutting down to but not into the large vessels. This incision should terminate two inches or more above the cervix. An assistant now makes pressure on each side of the abdomen in such a manner as to retract the margins of the abdominal incision, and bringing at the same time the uterus well for-

ward into the external incision. The lateral pressure prevents the escape of blood and amniotic fluid into the abdominal cavity. With one cut of the scalpel a button-hole is now made in the centre of the superficial incision, which penetrates the entire thickness of the uterine wall and without any reference to the location of the placenta. Both index fingers are inserted into this opening, which is then enlarged to the requisite size by tearing. The superficial incised wound determines the direction of the lacerated wound. The tear in the deeper tissues may take place somewhat obliquely, but this is not detrimental either in the delivery of the child or the suturing of the wound. Only a few seconds are required in making the opening in the uterus.

Extraction of Child.—As soon as the opening in the uterus is made, the operator plunges the right hand into the uterus and quickly grasps one or both feet and delivers the child as speedily as possible by traction, while the assistant keeps up lateral pressure. The hæmorrhage is greatly diminished or nearly arrested as soon as the surface of the wound is compressed by the body of the child. The uterine incision and delivery of the child can be completed in less than a minute.

I cannot deprecate too strongly preliminary *elastic constriction* of the uterus. The time occupied in the application of the elastic constrictor, and the rough handling of the abdominal contents, cannot fail in adding an increased risk to the operation and endangering the life of the child. Elastic constriction has been charged with causing postpartum hæmorrhage. We must admit that while its use may prevent bleeding during the early stage of the operation, it is apt to be followed by increased hæmorrhage after its removal. This objection holds good when it is resorted to before the delivery of the child. Its employment after this has been accomplished is attended by benefit. At this stage of the operation, no time should be lost in attempts to remove the placenta. If the placenta is implanted over the incision, it should be dealt with in the same way as in the delivery of the child in cases of placenta prævia. As soon as the child is delivered, the uterus should be brought out of the abdominal incision and constricted with a rubber tube the size of the little finger at a point below the visceral incision. Instead of tying the ligature, it is better to cross it; after making the constriction firm enough, clamp it at this point with a pair of hæmostatic forceps. Prior to making the constriction, the uterus should be firmly com-

pressed, so as to empty it as far as possible of venous blood. After the constrictor has been applied, the abdominal wound behind and above the uterus should be covered with a large aseptic compress wrung out of hot sterilized water. This prevents the entrance of blood into the abdominal cavity during the further steps of the operation, and also guards against the escape of the intestines.

At this stage, the placenta will be found partially or completely detached, and should be removed *in toto* with the membranes. If the placenta is adherent, it is separated at the margin nearest the wound, when complete detachment is effected by inserting the tips of the four fingers of one hand between it and the uterus. Fragments of membranes are looked for and removed. The interior of the uterus is then cleansed and lightly dusted with iodoform, for the purpose of preventing putrefaction of the blood, which accumulates after suturing of the uterine wound. During this part of the operation, it is important to secure uterine contraction by rubbing, and, if necessary, by douching with hot water. Should these measures fail, the introduction of a piece of ice into the uterine cavity may bring about the desired response.

Suturing of the Uterine Wound constitutes the most important and prolonged part of the operation. The suturing must be done in a manner that will secure such accurate approximation of the incised and torn surfaces as to arrest bleeding by pressure, and at the same time separate perfectly the uterine from the peritoneal cavity. Only round needles should be used, a small darning needle for the large and an ordinary sewing needle for the fine sutures. I use four rows of sutures, three of catgut and one of silk. The first row is made of medium-sized catgut sutures, half an inch apart, and including the entire thickness of the uterine wall with the exception of the peritoneum. This row of sutures is intended to bring and hold in contact the surfaces of the wound, and should, therefore, include considerable tissue on each side. After the sutures have been tied, there will be found a little gaping between them; this is overcome by applying a continued suture of fine catgut, which should bring in accurate contact everything else except the peritoneum. The next step in suturing is to bring in contact a strip of the serous surfaces, about one-third of an inch in width the entire length of the wound, by a third row of sutures. This row of sutures is intended to invert the serous margin of the wound on each side to the depth of at least

one-third of an inch. A small darning needle and medium-sized braided silk are used in applying these sutures. The sutures are made to include the peritoneum and considerable of the muscular tissue, so as to insure a firm hold. The needle is entered about one-third of an inch from the margin of the wound, and is made to emerge a few lines from the edge, when it is made to enter at a corresponding point on the opposite side, and is brought out one-third of an inch from the margin of the wound. Two sutures to the inch will answer the purpose. The third row of sutures is buried by a continued suture of fine catgut, which includes only the peritoneum and subserous connective tissue. If all of the sutures are properly inserted and tied, they can be relied upon in preventing hæmorrhage after the removal of the constrictor, even in cases in which the uterus does not contract firmly. The constrictor is now removed and contractions of the uterus secured before the organ is replaced into the abdominal cavity.

Inertia of Uterus.—If the uterus does not contract promptly, the organ is stimulated by rubbing, kneading, compression, hot douches, and, if need be, by the faradic current. Subcutaneous administration of ergot may also be called into requisition. Irrigation of the abdominal cavity is not necessary. Blood and amniotic fluid, both of which being aseptic fluids, are removed by sponging. As soon as the uterus contracts, it is returned into the abdominal cavity, and if it can be done, the omentum should be drawn over the line of suturing.

Suturing of Abdominal Incision.—Owing to the thinness of the abdominal wall, great care must be exercised in closing the external incision in order to prevent later the formation of a ventral hernia. I am inclined to advise in such cases Edebohls' method of suturing. This consists of a row of subcutaneous sutures of silkworm-gut which include every thing but the skin, and are buried by a second row of superficial sutures. Silkworm-gut is not absorbed, but as it gives rise to but little irritation, it readily becomes encysted. The dressing and after-treatment are the same as in coliotomy for abdominal tumors.

After reporting in brief the two cases of laparo-hysterotomy in parturient women that came under his care, he remarks:

In both of these cases hæmorrhage was completely arrested by the sutures. No oozing occurred from the needle punctures, as in both instances the last row of sutures was

made with fine catgut and an ordinary sewing-needle. All of the sutures are absorbed except those of the third row, which become encysted between the uterine and peritoneal cavities. It is advisable to use as many absorbable sutures as possible, but for the third row a material should be used which can be relied upon in maintaining approximation between the inverted serous surfaces for a sufficient length of time. My experience with these two cases has satisfied me that laparo-hysterotomy can be done on the parturient woman with as small a maternal mortality as now attends ovariectomy, and that unless the uterus itself is the seat of a removable life-threatening disease a hysterectomy is absolutely contra-indicated.

The removal of the uterine appendages and hysterectomy in the treatment of myo-fibroma are mutilating operations, and should be reserved for cases in which there is no other alternative. Laparo-hysterotomy is a valuable resource in treatment of myo-fibroma of considerable size in young women, located within or near the uterine cavity.

In such cases, laparo-hysterotomy is the ideal operation, and should take the place of oöphorectomy, hysterectomy, and vaginal removal by *morcellement*. In the non-pregnant uterus the tissues are much firmer and less vascular, and the incision has to be made almost exclusively with the knife. The knife should be laid aside as soon as the tumor is reached, when enucleation is effected with the fingers, curved, blunt-pointed scissors, or a Kocher's director. The hæmorrhage from the bed of the tumor can be controlled best by the antiseptic tampon, which must extend into the vagina, serving at the same time the useful purpose of an efficient capillary drain. The mucous membrane was incised the whole length of the bed of the tumor for the purpose of securing free drainage, and to facilitate the removal of the tampon. The hæmorrhage from the uterine incision can be readily arrested by suturing.

Conclusions.—1. Laparo-hysterotomy is justifiable when delivery through the normal passage is impossible without mutilation of the living child.

2. It is absolutely indicated where the conjugata vera is less than two-and-a-half inches, when obstruction is due to fixed pelvic tumors and advanced malignant disease of the cervix.

3. Mutilating operations on a living child for the purpose of effecting delivery are no longer legitimate obstetric procedures, as laparo-hysterotomy and symphysiotomy are life-saving operations for both mother and child.

4. Hysterectomy after laparo-hysterotomy is only justifiable if the uterus itself is the seat of a life-threatening removable disease.

5. Elastic constriction as a hæmostatic measure should not be resorted to in laparo-hysterotomy before the delivery of the child.

6. The uterine incision should be enlarged to the requisite extent by tearing for the purpose of diminishing hæmorrhage.

7. The visceral wound should be closed by four rows of sutures applied in such a manner as to absolutely arrest the hæmorrhage, and completely separate the uterine from the peritoneal cavity.

8. Laparo-hysterotomy is only indicated in the operative treatment of single, large myo-fibroma of the uterus in young women when the tumor is located within or near the uterine cavity.

9. In such cases, the uterine incision should be closed in the same manner as in operations on the pregnant uterus, and the bed of the tumor should be packed with iodoform gauze, which is brought through the cervix into the vagina, thus serving the double purpose as a hæmostatic tampon and capillary drain.

Tobacco Smoking, etc., Kill Cholera Germs.

It has been often asserted that inveterate tobacco chewers and smokers are remarkably exempted from attacks of Asiatic cholera. It may be of interest to all such to know that the Hygienic Institute of the University of Berlin has published (*Abstr. San. Rep.*, Nov. 18, 1892) the following conclusions, after repeated experiments made with relation to the spread of the cholera germ through cigars and tobacco:

(1.) The comma bacillus of cholera Asiatic die through drying up on dried tobacco leaves even quicker than drying up on glass, and in this condition they die in an hour on the average.

(2.) On moist tobacco leaves, the comma bacilli do not increase, and are killed after a short time.

(3.) The comma bacilli were not proved to exist in the samples of cigars manufactured in Hamburg during the prevalence of the epidemic.

(4.) Through the fermenting and drying processes which cigars must undergo before they are ready for shipment, the cholera bacilli are killed after a short time, even when

packed, by way of experiment, in the linen bands about the cigars.

(5.) Tobacco smoke checks the development of cholera bacilli, and is quickly fatal.

Book Notices.

Diseases of the Rectum and Anus, their Pathology, Diagnosis and Treatment. By CHAS. B. KELSEY, A. M., M. D., New York, Professor of Diseases of the Rectum, New York Post-Graduate Medical School and Hospital; Late Professor of Diseases of the Rectum, University of Vermont, etc. *Fourth Edition. Revised and Enlarged.* With two Chromo Lithographs and 162 Illustrations. 8vo. 496 pages. Extra Muslin, \$4. New York: Wm. Wood & Co.

This Fourth Edition is a work that the general practitioner cannot well do without. It deals with troubles about which the doctor is daily consulted, in such a practical way—especially as relates to their diagnosis and treatment—as to enable him to recognize and treat many of them without occasion to think of referring the patient to the special surgeon. As for the specialist, it would be something of a reflection upon him if he does not know the teachings of so eminent an authority. As compared with former editions, this one is, to all intents and purposes, a new book—such has been the number of changes, the thoroughness of revision, and the amount of added material—all brought fully up to date. As a text-book, it is most excellent. So that, all in all, it is unquestionably the book on diseases of the rectum and anus that every general practitioner, as well as rectal surgeon, should use for practice.

Hydrotherapy at Saratoga. By J. A. IRWIN, M. A., M. D., etc. Cassell Publishing Co., New York. Cloth. 12mo. Pp. 270.

Whoever, at all interested in the subject of mineral waters, begins the reading of this book, is not apt to lay it aside until the last reading page is turned. Its object is to establish among educated readers a correct and unprejudiced valuation of mineral waters generally—but those of Saratoga in particular. It avoids the ordinary advertisement clap-trap statements, and is perfectly fair in advice. It is a work in the right direction—a treatise on natural mineral waters; and attempts to define their uses and non-uses.

Text-Book of Medicine. By DR. ADOLF STRUMPELL, Professor and Director of the Medical Clinique at Erlangen. *Second American Edition.* Translated by Permission from the Second and Third, and Thoroughly Revised from the Sixth German Edition, by HERMAN F. VICKERY, A. B., M. D., Instructor in Clinical Medicine, Harvard University, etc., and PHILIP COOMBS KNAPP, A. M., M. D., Clinical Instructor in Diseases of the Nervous System, Harvard University, etc. *With Editorial Notes* by FREDERICK C. SHATTUCK, A. M., M. D., Jackson Professor of Clinical Medicine, Harvard University, etc. *With 119 Illustrations.* New York: D. Appleton & Co. 1893. 8vo. Pp. 1,143. Cloth, \$6; Sheep, \$7.

Although the first American Edition was brought to the attention early in 1887, its thoroughness and value were so highly appreciated, that it had become the adopted text or reference book in nearly thirty colleges. The improvements and additions in almost every section have increased the value of the present edition, so that now other colleges have adopted it, and many practitioners have come to depend on it as their guide. While it is the leading foreign text-book authority at this time, the notes of the translators and the Editorial Notes of Dr. Shattuck, make it also a most reliable work for American students and practitioners. The work, as revised, presents the latest of accepted views on pathology and etiology, while in matters of diagnosis and therapeutics, the advice given is such as best helps the clinician to recognize the diseases in hand, and to direct the plan of treatment most serviceable to the patient. This is a great and useful book on the Practice of Medicine, and needs only to be examined by doctors to lead them to adopt it as their book for daily use.

Cholera—Its Protean Aspects, and Its Management. By Dr. G. ARCHIE STOCKWELL, F. Z. S. *In Two Volumes.* 1893. George S. Davis, Detroit, Mich. 12mo. Pp. 306. Paper. Fifty cents for the two volumes.

These are numbers of the "Physician's Leisure Library," evidently prepared hastily in anticipation of the epidemic which was expected by many to be sweeping over America by this time. The author asserts, with an assurance that is remarkable for one accustomed to close habits of observation and ratiocination, that cholera is not a disease of known microbic origin. Whatever may be the ultimate result of study, of observations made and being made, it is certain that too many facts point to a possible causation of cholera

by a specific microbe for the doctrine yet awhile to be so vehemently antagonized as by the author of these volumes. We would simply advise our readers to read attentively the partizan views presented by Dr. Stockwell, and then study out the meaning of facts as they are being brought to light by investigators of the present epidemic "across the water." The important role played by the nervous system in cases of cholera is the pet idea of the author.

Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By JOHN V. SHOEMAKER, A. M., M. D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine, Medico-Chirurgical College of Philadelphia, etc. 2d Edition. Revised. In Two Royal Octavo Volumes. Vol. I, 353 pages: *Devoted to Pharmacy, General Pharmacology, and Therapeutic and Remedial Agents Not Properly Classsed with Drugs.* Cloth, \$2.50 net; Sheep, \$3.25 net. VOLUME II, 680 pages: *An Independent Volume Upon Drugs.* Cloth, \$3.50 net; Sheep, \$4.55 net. Philadelphia: The F. A. Davis Company, Publishers.

The fact that within two years a second edition of this *Treatise* has been demanded indicates the favor with which the work was received. The author has availed himself of the opportunity thus presented to revise the text of the former edition in some particulars, and to add descriptions of a number of newly introduced therapeutic preparations. While the title of Volume I, as above given, gives a fair idea of its scope, Volume II treats of the therapeutic agents or drugs, arranged alphabetically, from their pharmacological, therapeutic and toxicologic standpoints. The effort of the author is to present a useful, practical work, adapted to the wants of students and physicians, and he has succeeded admirably. To Volume I, a Clinical and a General Index is appended; while the three indexes appended to Volume II include "Table of Doses," "Index of Drugs and Preparations," and a "Clinical Index"—which indexes are most serviceable for easy references. Vol. I possesses the special feature of giving prominent consideration to a number of agencies that are not drugs. We most cordially recommend this *Treatise* for its completeness, accuracy and general excellences for student or practitioner.

*Editorial.***Medical Society of Virginia, Session 1893.**

Notwithstanding "the hard times" in financial circles, the prospects of a largely attended and profitable session of the Medical Society of Virginia, in Charlottesville, beginning Tuesday night, October 3d, are most encouraging. The doctors of Charlottesville and of the University of Virginia have combined their influence and efforts in order that nothing may be left undone to add to the success and pleasures of the session. Beyond other arrangements for the profit and entertainment of the visiting doctors, the Medical Faculty of the University have arranged for a "Microscopical Soiree," and have provided some eighty or ninety microscopes for the examination of many hundred bacteriological, pathological, and other specimens, including the comma bacillus. The titles of papers announced for the session are most of them on practical subjects, and their authors are recognized as thoroughly competent to deal with them ably. Many distinguished visitors from other States are expected to be present, who will contribute to the interest of the scientific proceedings by papers and discussions. The Secretary has in hand by far the largest list of Applicants for Fellowship that has ever been in his hands any year so far in advance of the time of the session, and he is advised that many more names will be added to the list before the meeting. The Executive Committee is about ready to issue the Circular Announcement of the session. Committees to examine the essays offered in competition for both Dr. Hunter McGuire's prize of \$100 and of Dr. Joseph Price's prize of \$100, have been appointed, and will promptly proceed to perform their task. It is important to remember that all essays offered in competition for either of these prizes must be in the hands of the Secretary of the Medical Society of Virginia (Dr. Landon B. Edwards, Richmond, Va.) by September 20th, 1893.

Weekly Abstract of Sanitary Reports Issued by Supervising Surgeon-General M. H. S. Vol. VII.

We acknowledge receipt of a bound volume of these Reports for the year 1892. It is well indexed, contains much statistical information, and gives an official history of the occurrence of infectious diseases during the year.

Amick Chemical Co., and Its Insult to the Profession.

A practitioner of recognized ability and an Ex-President of one of our State Medical Societies, under a misapprehension as to the character of this Company, and at the request of a patient who had seen its advertisement, wrote for a trial package. In the correspondence, the Doctor remarked in a very mild way that if the Company wished the profession to aid them in introducing their remedies, the profession should be made to know more of their composition, etc. In reply, the Company wrote the Doctor a personal letter, from which the following extracts are taken as a sample: "In reply to your very impertinent letter of the 12th, allow us to say that you have evidently in your mind placed the cart before the horse." "We are not asking the profession to help us out. *We are dictating to it.*" "We are in too independent a position to listen to any narrow-minded and big-headed nonsense." "If you think for one moment that the originators and manufacturers of these drugs are going to jeopardize their reputation * * * by making public the formulas at the request of a few, you are much mistaken." "It is a matter of indifference whether or not you order the treatment." Such are some of the insulting sentences written a prominent member of the profession, whose whole offense seems to have been a request for information. And yet this is the very Company that has scattered advertisements broadcast addressed, "*Dear Doctor:* As a conscientious physician of good standing," etc. "All the facts regarding the chemical treatment are now so well established *and so easily obtained by every physician* * * * it is manifestly a duty which he owes to his clients to fully investigate," etc. "Be frank with us, and let us have a reply from you." Another circular unsolicited claims to present "Confidential terms to physicians." To add to the brazen effrontery and its insulting arrogance, this very Company during the past few weeks addressed a letter to a gentleman in the city of residence of the doctor above referred to, with the remark, "Dr. —, of your city, will be pleased to give you full particulars concerning Dr. Amick's chemical treatment"—apparently forgetful of the fact that they had only a few months before written this same Doctor the letter from which we have made above extracts. It involves the grossest of deception to assert that the Doctor "will be pleased to give you full particulars concerning" the treatment about which respectfully solicited information is insultingly denied. How apropos the maxim

adopted by courts which, as applied to a wilful deception, sustains the charge of perjury: "False in one, false in all."

Gray's Anatomy, New (13th) Edition.

Another edition, the thirteenth, of this standard work is announced for early publication by Messrs. Lea Brothers & Co. It is hardly too much to say that this work has been the most popular of all medical text-books whatever since its first appearance in 1851. Its text has been revised successively by the foremost anatomists of a generation, and the present edition embodies whatever changes were necessary to make it represent its advancing science. The illustrations have always been noted for their clearness. Their large size has rendered it possible to print the names of the parts directly upon them, thereby indicating not only their names, but also their extent—a most important matter. A liberal use of colors has been made, to secure additional prominence for certain parts. Notwithstanding these improvements, the constantly increasing demand has justified a reduction in the price of the colored edition. An early review will appear in these columns.

Sharp & Dohme's Price-List for 1893.

Among the many important new things noticed in examining the edition of the Price-List of July, 1893, of this most reliable house are effervescent lithia tablets, new aluminium hypodermic cases, and numerous additions to their list of tablets triturates and hypodermic tablets. Among the latter are tablets of magnesium sulphate, concerning which some investigation is now being made.

Messrs. J. W. Randolph & Co.—Medical Text-Books, etc.

This old reliable book store, etc., has arranged to carry full lines of the text and reference books to be used in the medical colleges this season. This firm carries the largest stock of books—new and old—in the State. Their store is Nos. 1302-1304 east Main street, Richmond, Va. See their quarter page advertisement—page 70.

The Woman's Medical College of Baltimore

Has moved into its new building, corner of McCulloch and Hoffman streets, and is keeping abreast with the move of Colleges for men for a higher standard of education by adopting the three-years' graded course.

The Discoverer of Modern Surgical Anæsthesia—Dr. Crawford W. Long.

We are greatly indebted to Dr. Luther B. Grandy, of Atlanta, Ga., Demonstrator of Anatomy in the Southern Medical College, for "A Contribution to the History of the Discovery of Modern Surgical Anæsthesia, with Some New Data Relative to the Work of the Late Dr. Crawford W. Long, of Athens, Ga.," which will appear in our October number, 1893. We the more highly appreciate the favor of this "Contribution" to this journal, as the author is himself editor of the *Atlanta Medical and Surgical Journal*—one of our ablest exchanges. The doctor has selected this journal, however, for publication of his paper, which will ever remain one of great historic interest in connection with the subject of Surgical Anæsthesia, because the memorable paper of Dr. J. Marion Sims, pointing out that Dr. Crawford W. Long is entitled to the honor of being known as the discoverer of the surgical anæsthetic uses of sulphuric ether, was first published in the May number, 1877, of the *Virginia Medical Monthly*. The style of Dr. Grandy's article is elegant and entertaining; his facts are thoroughly authenticated; his conclusions leave no shadow of doubt as to the validity of all prior claims made for Dr. Long.

Writer's Cramp—Important Notice.

So many of our useful citizens are afflicted with this formidable malady, which is rarely cured by ordinary methods, that we regard it of special interest to the profession, as it must be to victims of this disabling condition, to announce the probability of an early visit to Richmond by Julius Wolff, the German specialist, for the purpose of treating patients. He stands unequivocally endorsed by such eminent authorities and patrons as Charcot, Erb, Nussbaum, Esmarch, Hertz, Stellwag, Benedikt, Billroth, etc. His treatment consists principally in special massage and gymnastics. As von Nussbaum says, "One can really say that the good results of Mr. Wolff's method are founded chiefly in his personal experience and individual dexterity."

We take special pleasure in calling attention to the four-page circular relating to this subject found on advertising pages 66a, b, c, and d (white paper), in this issue, with the request that doctors call the attention of their interested friends to it, and ask them to address immediately Mr. E. B. Marquess, box 258, Richmond, Va., for further information.

The Medical Examining Board of Virginia

Will hold its second Semi-Annual Examinations, 1893, in the Hall of the House of Delegates, Richmond, beginning promptly at 9 A. M., Wednesday, September 20th. The Secretary, Dr. Benjamin Harrison, Richmond, Va., will be in the Hall a half hour in advance, to register those who may not have previously done so. It is of special importance to all applicants for examination to know that unless they are in the Hall by 9 A. M., September 20th, they cannot undertake the examinations during this session. Read carefully the Announcement of the Medical Examining Board of Virginia on advertising page 72. Murphy's Hotel, corner Broad and Eighth streets, American or European plan as preferred, is the usual rendezvous of non-resident members of the Board, applicants, etc.

Milk and Drinking Water as Causes of Typhoid Fever.

Since the volume of manuscript renders it impracticable for us to publish the paper by Dr. William S. Gordon, of this city, on "Some of the Causes of Typhoid Fever," it is but due him to put on record the rare compliment to its merits shown by the Richmond Academy of Medicine and Surgery, in that the last three semi-monthly meetings were given up almost wholly to its reading by the author. The meetings were especially well attended, and undivided attention was given to the hearing of each of the three papers. The amount of research, and the amount of well-arranged detail of facts and figures presented in support of the proposition involved in the caption of this notice, were such as to make the papers of very great interest and profit to any studying up the subject.

Formulæ of Animal Extracts—Correction.

Our attention has been called to an injustice done in the paragraph on page 488, August number, which leaves the inference that the discoverer of the virtues of "Animal Extracts" had patented the formulæ, etc. We had not supposed such a thing had been done, and are assured has not been done. In fact, full details as to the mode of preparation of these "Extracts" were published in our March number, 1893, and full investigation was solicited. This statement is due Dr. Hammond, and it is likewise due Messrs. Parke, Davis & Co. to add that their advertisement headed "An Apology" (August No.) does not warrant the inference.

Proposed National Quarantine Law.

The National Quarantine Committee of the New York Academy of Medicine has concluded its work in drafting a national quarantine law designed to protect American ports from the invasion of disease. The law which it proposes divides the United States into eleven sanitary districts, and provides for a National Bureau of Public Health with fifteen members, eleven of whom shall be appointed by the President, with the consent of the Senate, one to come from each of the sanitary districts, and to be known as the Medical Commission. The other four members are to be *ex-officio*, the Surgeon-General of the Army, the Surgeon-General of the Navy, the Supervising Surgeon-General of the Marine-Hospital Service, and a law officer detailed by the Attorney-General from the Department of Justice. The powers of the Commission are defined, and the law provides that they may, at their discretion, invite representatives of State Boards of Health to confer with them.—*Boston Med. & Surg. Jour.*, Aug. 17.

Medical Practice in Colorado.

The Colorado State Board of Medical Examiners, following the lead of many other States, announces that hereafter it will recognize diplomas only from three-year medical schools as entitling their holders to license. Each lecture course must be at least twenty weeks, in three separate years, and must embrace instruction in anatomy, chemistry, physiology, pathology, materia medica and therapeutics, obstetrics and gynecology, surgery, medical jurisprudence, theory and practice of medicine, and hygiene. In default of such a diploma, the candidate for license must pass examination on anatomy, chemistry, physiology, pathology, surgery, obstetrics and gynecology, theory and practice of medicine. Dr. J. N. Hall, Denver, Col., Secretary of Board of Medical Examiners.

The Illinois State Board of Health

Is revising its Report on Medical Colleges and Medical Education throughout the United States and Canada. It is the duty of any in the profession who can render aid to the Illinois Board in the line indicated to do so, as it is well known that it is chiefly to the Reports of this State Board of Health that the most useful information, regarding medical educational institutions, is obtained. Dr. J. W. Scott, of Springfield, Ill., is Secretary of the Board.

Dunglison's New Pronouncing Medical Dictionary.

A new edition of *Dunglison's Medical Dictionary* is announced, by Messrs. Lea Brothers & Co., of Philadelphia, as ready for issue this month—in ample time for adoption in the College sessions this Fall. It has been thoroughly revised and greatly enlarged, and will contain about forty-four thousand new medical words and phrases. Pronunciation has been introduced into the new edition by means of a simple phonetic spelling. This work has always been noted for the fulness of its definitions, ample explanation being its distinguishing characteristic. In the *new edition*, much encyclopædic information, difficult of access elsewhere, will be found conveniently at hand. Especial attention has been devoted to matters of practical value. A review will appear in an early issue. Price, \$7 in cloth; \$8 in leather.

Wm. F. Jenks' Memorial Prize of \$500.

Under the deed of trust of Mrs. Wm. F. Jenks, the third Triennial Prize of \$500 will be awarded the author of the best essay on *Infant Mortality During Labor, and its Prevention*. The prize is open to the competition of the whole world, but the essay must be the production of one person, must be presented in the English language, type-written, distinguished by a motto, accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. Unsuccessful essays will be returned to the authors if reclaimed within a year. All competing essays must be addressed to Dr. Horace Y. Evans, Chairman Wm. F. Jenks Prize Committee, College of Physicians of Philadelphia, Pa., U. S. A., and must be in hand before January 1st, 1895.

The Atlanta Polyclinic.

We are glad to learn that the Faculty are determined to make this institution in every way worthy of the confidence and patronage of the Southern doctors. Its location in the progressive city of the South gives it special claims. The Faculty is an excellent one. Its clinics are well attended—the first quarterly report showing over 1,100 cases admitted to clinics and over 3,500 treatments, besides more than 100 surgical operations, ranging in magnitude from removal of the superior maxilla, amputation at upper third of thigh, cœliotomy for extra uterine pregnancy, etc., down to the minor surgical and gynecological procedures.

Treatment of Obesity and Fatty Degeneration.

Dr. G. H. Thompson, Prof. Mater. Med., St. Louis College Phys. and Surgery, reports several cases (*St. Louis Clinique*, Aug., 1893). He used *fucus vesiculosus*, one or two drachm doses of the fluid extract, "with some slight benefit." He then determined to try *phytolacca decandra*, as recommended by Dr. M. M. Griffith, in doses of from ten to fifteen minims four or five times daily of phytoline—Walker—and the amount of fat was lessened to about normal in from six to ten weeks. Starchy foods were prohibited. Phytoline (Walker) is prepared from the ripest berries of *phytolacca decandra* after having been touched by frost. It does not cause nausea, vomiting, and diarrhœa, as do the official preparations of the root. Dr. Thompson thinks it especially indicated in cases characterized by fatty degeneration of the viscera—especially the heart and liver.

Medical Publishers' Association.

It is proposed that the publishers of the medical journals of the United States organize themselves into an Association during the session of the Pan-American Medical Congress in Washington, D. C., which convenes September 5th, 1893. If properly organized, such an Association will be of great protective value to advertisers, as well as to the business interests of the journals of the country. Special arrangements have been made with Hotel Arno as the place for holding the meetings, beginning about 9:30 A. M., September 5th, 1893.

Food—A Journal of Hygiene and Nutrition—

Begins its Volume IV in new, attractive form, and with a new pushing editor, Dr. Charles H. Stowell, of Washington, D. C. Price, \$2 a year. The Clover Publishing Company, of New York, N. Y., are the publishers, to whom remittances should be made for subscriptions. "Food" is so well edited as to make the journal cheap at the price named. The August number is an excellent one for doctors, nurses, and families.

Messrs. Bartlett, Garvens & Co.,

Dealers in surgical instruments, etc., have moved their store to No. 18 N. 9th street, Richmond, where they opened with an increased stock—including many improved instruments.

System of Medical Jurisprudence and Toxicology.

Messrs. Wm. Wood & Co., of New York, N. Y., announce the publication of such a "System," in four large 8vo pages (about 600 pages each), "as rapidly as they can be issued from the press." "Illustrated wherever desired by line and 'half-tone' engravings and chromo-lithographic plates." *Sold by Subscription only*: muslin, \$5 per volume; leather, \$6. Edited by R. A. Wilthaus, A. M., M. D., Professor of Chemistry, Physics, and Hygiene, University of City of New York, and Tracy C. Becker, A. B., LL. B., Professor of Criminal Law and Medical Jurisprudence, University of Buffalo. With the collaboration of 17 associated authors, three of whom are legal and 14 are medical. The plan of the "System" is such as to especially adapt it to the courts of the various States of America. The obsolete in *medical* testimony is eliminated, and the most recent of scientific facts are incorporated to guide the doctor in giving testimony in all sorts of cases. Practically speaking, it is proposed that this work shall be so thorough as to supplant the requirement for any other text or guide-book for American practitioners of medicine or law.

Text-Book of American Gynæcology.

Mr. W. B. Saunders, Publisher, etc., of Philadelphia, Pa., announce this work as ready for issue during September. It is the joint work of Drs. Wm. R. Pryor, Howard Kelley, Byford, Baldy, Tuttle, and others who stand before the profession for all that is progressive in gynæcology. The work will contain operations not before described in any other book—notably ablation of fibroid uterus. It is designed as a profusely illustrated reference-book for the practitioner, and every practical detail of treatment is precisely stated.

International Medical Congress Postponed.

The meeting announced to be held in Rome this month has been postponed until April, 1894, because of the presence of cholera Asiatica in Italy at this time.

Florida Medical Association.

The officers-elect for the year 1893-4 are Dr. Frank Caldwell, of Sanford, *President*; Drs. A. F. Wakefield, of Jacksonville, and R. P. Izlar, of Ocala, *Vice-Presidents*; Dr. J. D. Fernandez, of Jacksonville, *Secretary and Treasurer*.

Obituary Record.

Dr. Jean Martin Charcot,

Known throughout the world as the eminent neurologist of France, died at Morvan, August 15th. He was born in Paris 1825. Since his appointment, in 1856, as Physician to the Central Bureau, he devoted himself to the study of the nervous system. His contributions to medicine in the form of books, lectures, journal articles, etc., are so numerous that it would require many pages of this size simply to record their titles.

Dr. William Grebe,

The only native German practitioner in Richmond, died at his home in this city August 13th, 1893, after a brief illness. He received his degree of Doctor of Medicine from the University at Marburg Hessen-Nassau, Prussia, in 1853. He moved to this city about twenty-five years ago, and soon gained an excellent practice among the German population.

Sennine—The New Antiseptic,

Advertised in this issue for the first time, is a product of phenol and boracic acid—two of the best known germicides; is a powder, readily soluble in water (1 part to 20 parts), non-toxic, free from nauseous odor, safe internally as well as externally, and is comparatively inexpensive. It comes in two-ounce tin box, with inner top perforated, convenient to dust on a wound, etc. Write to Dios Chemical Co., St. Louis, Mo., for sample.

Elixir Iodo-Bromide of Calcium Comp.

Hugh Nelson, M. D., Washington and Third Aves., Minneapolis, writes: "I have used 5 gallons of the Elixir Iodo-Bromide of Calcium Comp. (Tilden's), and obtained better results than from any other alterative I have known in my twenty-five years' practice. I found it particularly useful in scrofulous and glandular enlargements; also in diseases of a syphilitic nature. It appears to agree well with the stomach."

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RICHMOND, OCTOBER, 1893.

Original Communications.

ART. I.—A Contribution to the History of the Discovery of
Modern Surgical Anæsthesia—With Some New Data
Relative to the Work of Dr. Crawford W. Long.

By LUTHER B. GRANDY, M. D., of Atlanta, Ga.,

DEMONSTRATOR OF ANATOMY SOUTHERN MEDICAL COLLEGE; EDITOR OF ATLANTA
MEDICAL AND SURGICAL JOURNAL; MEMBER OF THE GEORGIA MEDICAL ASSOCI-
ATION, ETC.

The true story of the first discovery of anæsthesia, and of the circumstances connected therewith, has not yet been told in print. Reliable history is never written by the generation which makes it. The generation which inaugurated the era of painless surgery has passed away; the participants in the long and bitter controversy over the question of priority have disappeared; and those of us who have since come upon the scene may now undertake to gather up the data relating to that great discovery, unaffected by favor and unbiased by prejudice.

In 1839, Velpeau, of Paris, described the attempts to find some agent capable of preventing pain in surgical operations as nothing less than chimerical; and in 1846, Sir Benjamin Brodie, of London, said: "Physicians and sur-

geons have been looking in vain, from the days of Hippocrates down to the present time, for the means of allaying or preventing bodily pain." Yet four years and a half before that statement was made, surgical anæsthesia, under the influence of ether, had become a demonstrated fact in a Georgia village, in the hands of Dr. Crawford W. Long. The claims of Dr. Long to the honor of this discovery have been presented to the world by no less a champion than the distinguished J. Marion Sims himself. Dr. Sims' article appeared in the *Virginia Medical Monthly* May, 1877; but it was hurriedly prepared on the eve of the author's departure for Europe, after an imperfect correspondence with Dr. Long and others, and contains some errors which the latter was anxious to have corrected. Upon these errors the claim has been raised that to another belongs a large part of the credit which the profession has accorded to Dr. Long.

My own interest in this matter is due to an accident, which need not be related here. For the purposes of this paper I have been kindly furnished by the Long family with all the documents, correspondence, and certificates which had been gathered by Dr. Long in support of his claim to priority. I have had access to papers which Dr. Sims never saw. I have talked with some persons, and corresponded with others, who were personally acquainted with Long and his work in 1842, and am thus able to present some features of the case hitherto unpublished.

The paper of Dr. Sims had its origin in an interview with Dr. P. A. Wilhite, of Anderson, S. C., October, 1876.* Dr. Wilhite was witnessing one of Dr. Sims' operations in New York, and remarked that he "assisted at the first operation ever performed under the influence of ether." He then said that this operation was done by Dr. C. W. Long, of Jefferson, Ga., in March, 1842, while the patient was completely anæsthetized with sulphuric ether. He "presumed that he (Wilhite) was the first person who ever profoundly etherized any one," and then related how he had playfully and unin-

*Dr. Wilhite died in the early part of this year. I heard of his death, for the first time, after this paper was begun.

tentionally etherized a negro boy to the point of complete anæsthesia in the fall of 1839, near Athens, Ga. Sims' article makes it appear that four young men—Wilhite, Groves, and two Longs (relatives of Dr. Long)—were medical students in the office of Dr. Long prior to the events of 1842, and the author states that Wilhite's story about the negro boy encouraged Long in his belief that ether might be used for surgical purposes. These statements of Sims', based entirely upon information received from Wilhite himself, have caused the friends of the latter to magnify his relation with this matter, and even to enter a claim in his behalf.*

As a matter of fact, Wilhite did not become a student of Dr. Long in his office until the latter had done several operations under ether. After graduating at the University of Pennsylvania, in 1839, Dr. Long spent one year in New York city, and returned to Jefferson, Ga., to practice medicine in the summer of 1840. It is not likely that he would have attracted four students to his office at the age of twenty-five. He had no students under him until after his marriage, August, 1842, and the first was his cousin, D. J. Long. In another place in Sims' paper, Wilhite is made to say that he assisted Dr. Long in operations "under the influence of ether in 1843 and '44, while he was a student in Dr. Long's office." Wilhite was not even present at Dr. Long's first operations. In the entire volume of papers before me relating to Long's first two or three operations, including the sworn statements of parties who were actually present, no mention is anywhere made of Wilhite. Moreover, not until years afterward does it seem to have occurred to Wilhite himself that he had any connection whatever with the discovery of anæsthesia. When Dr. Long's case was being argued before Congress, he obtained from Wilhite a certificate (Feb. 4th, 1854,) with these words: "I entered the office of Dr. C. W. Long, of Jefferson, Ga., in October, 1844,

*See *Transactions of South Carolina Medical Association*, April, 1883, and also "History of Surgery in South Carolina," by Dr. E. F. Parker, *North Carolina Medical Journal*, June, 1893.

where I continued about eighteen months. Not long after I entered his office, and not later than 1845, I heard the said Dr. Long speak of having used sulphuric ether by inhalation, to prevent pain in surgical operations, he referring to a period of time before I entered his office." The remainder of the certificate states that he (Wilhite) had heard others speak of the operations, and he was under the impression that he had himself talked with the first patient upon whom an operation had been done. Between this certificate and the story as related to Sims, twenty-three years later, there seems to be an irreconcilable conflict.

Up to the time of Dr. Long's death, the relations between himself and Dr. Wilhite appear to have been very friendly. In his interview with Dr. Sims, in 1876, Wilhite said that "Long was the real and original discoverer of anæsthesia, and believed he would be so acknowledged if all the facts in the case were fully set forth." When Sims was in correspondence with both of them during the preparation of his paper, Wilhite wrote Long :

"ANDERSON, S. C., Jan. 16, 1877.

"*Dr. C. W. Long :*

"Dear Doctor,—I have just received a letter from Dr. J. Marion Sims, of New York, stating that you will not write to him, or at least that he wrote to you about three weeks ago and had received no reply. If you don't do so soon it will be too late. He has been preparing an article for publication, and wants to place you right before the world. You have been apprised, I suppose, of the nature of the article. Why you have been connected with, and will be the leading spirit in, the article, happened in this way : While I was in New York last summer at one of Dr. Sims' private operations, several prominent physicians being present, I happened to remark that I witnessed the first or second operation ever performed under an anæsthetic. Every one said that I was mistaken, and particularly Dr. Sims. * * * After that I met Sims at his office and gave him such particulars as I could recollect of your first operation, and also urged your claims to the priority. He at once wrote you on the subject, and has since become very much interested in the matter.

"Now, Doctor, it is but justice to you, as it is due the

world, that you give Dr. Sims such information as he asks for at once, as he is going to all this trouble only to place the proper credit of this great discovery on the man who justly deserves it. I earnestly hope you will comply with the Doctor's request as soon as possible. * * * As I have been the means of giving the investigation of this subject its present shape, I am exceedingly anxious that you should give all the information you can, that you may, and justly too, receive the credit of this great discovery. If you will act, it will certainly be so. Dr. Sims also wants a short history of your life, which don't fail to give.

"Hoping to hear from you, I remain yours, etc.,

"P. A. WILHITE."

In reply to this, Long reminded Wilhite that he did not witness the operations, as stated, and asked him to send Sims a certificate similar in character to the one above quoted. Dr. Wilhite replied :

"ANDERSON, S. C., Jan. 27th, 1877.

"Dr. C. W. Long :

"Dear Doctor,—Yours of the 22nd is at hand, and I have also just received a letter from Dr. Sims, which I will answer to-day. In regard to the certificate you spoke about, it will not be necessary, I think, as Dr. Sims has my statement written out in full. He was very particular to get all the points and facts I could recollect. In my statement *I did make a mistake about my being present at the first or second operation, which mistake I will correct.* (Italics mine—L. B. G.)

"If you still think proper, I will send a certificate. Let me know and I will give you any assistance in this great matter.

"Yours truly,

"P. A. WILHITE."

Sims' article appeared in May, 1877, and Long at once noticed the errors and the absence of the promised corrections. He requested Sims to correct the mistakes, but the latter replied that the "misplacement of a few names and dates would not alter the main facts in the case." He sailed for Europe in a few days, and the matter was dropped.

The above is sufficient to show, beyond the shadow of a doubt, that Dr. Long was the "real and original" discov-

erer of the anæsthetic properties of ether, *and that he could not have received any assistance or suggestions whatever from young Wilhite.*

It is not material to the strength of Dr. Long's case whether the negro boy incident ever happened or not. However, there is no evidence to show that he knew anything of it until nearly forty years after it is said to have occurred. I have lately had an interview with Miss Fannie Long, to whom Dr. Long had often told and retold the circumstances relating to his discovery. In his later years she became thoroughly familiar with every detail of her father's claim, and at his death he confided to her keeping all the documentary evidence in his case. She tells me that the above story was related to Dr. Long by Dr. Wilhite himself, in the presence of several of the family, when Wilhite was on a visit to her father's house in the spring of 1877. After hearing it, Dr. Long replied: "Doctor, this is the first time I ever heard of it."

There is living near this city an old gentleman, who still preserves a clear recollection of the events of that period, and to him I am indebted for the following letter:

"EDGEWOOD, DEKALB COUNTY, GA., June 27th, 1893.

"*Dr. L. B. Grandy:*

"Dear Doctor,—In response to your inquiries, I will state that I was intimately acquainted with Dr. C. W. Long, and was frequently with him after he located in Jefferson, Ga., in the summer of 1840. He often administered the vapor of ether to us young men of the village for the exhilarating effect produced, and he told me that he became acquainted with this property of ether while a medical student in Philadelphia. Upon one occasion, in the fall of 1841, I think, he remarked to me that he thought ether could be used to prevent pain in surgical operations, and that he intended to make the trial at his earliest opportunity. I moved to Athens January 20th, 1842, and introduced the inhalation of ether among the young men in that place. Before this time the practice of thus taking ether was unknown in that section. At Dr. Long's request, I sent him some ether from Athens in the winter of 1842. Shortly afterward he came

to Athens, and told me that he had operated successfully under the influence of the ether.

"These are the facts as I now remember them. Up to the time that I moved from Jefferson, Dr. Long did not have any students in his office. If ether had been employed in sport in the neighborhood of Athens previous to my introduction of it there, I never heard of it. In reaching the conclusion that ether might be used in surgery, I do not think Dr. Long received any outside assistance. In my opinion, the idea was original with him.

"Yours, very truly,

"R. H. GOODMAN."

The circumstances which led to Dr. Long's first operation are thus described by himself, in a letter to Hon. D. L. Swain, LL. D., June 4th, 1866:*

"In December, 1841, a company of young men were in my office, and requested me to prepare some nitrous-oxide gas for inhalation. I informed them that I did not have the necessary apparatus for making it, but that I had an article which would produce like exhilarating effects, and which I considered equally safe. They expressed a desire to inhale it, and it was administered that night to most of the company. They were so well pleased with the effects that it soon became fashionable to inhale the ether, and I noticed persons while under its influence receive injuries which were sufficient to produce pain, but on inquiring of them if they suffered any pain, they uniformly told me that they had not. I noticed one young man receive an injury of the ankle-joint, which disabled him for several days, and he informed me that he did not feel the slightest pain until the effects of the ether had passed off. Observing these facts, I was led to believe that surgical operations might be performed without pain, and proposed to the gentleman on whom my first operation was done that if he would submit to the operation while etherized, I would charge nothing, or only a nominal fee, for operating."

This operation was for the removal of a tumor from the neck of James M. Venable, March 30th, 1842. A second tumor was removed from the same patient June 6th follow-

*Dr. Swain was the uncle of Dr. Long's wife, and at the time of this letter was President of the University of North Carolina.

ing.* The last clause in the above letter will explain the following entry in Dr. Long's ledger :

JAMES VENABLE.

1842.

Jan. 28th—Sulphuric ether.....	\$ 25
March 30th—Ether and excising tumor.....	2 00
May 13th—Sulphuric ether.....	25
June 6th—Excising tumor.....	2 00

The details of that first operation under ether have been published by both Dr. Long and Dr. Sims. Concerning the subsequent operations, not much need be said.

On *July 3*, 1842, Dr. Long amputated the toe of a negro boy for disease.

On *September 9*, 1843, he extirpated a tumor from the head of Mary Vincent, of Jackson, Ga.

On *January 8*, 1845, he amputated two fingers of a negro boy. The certificates of two witnesses to this operation state that the first finger was removed under the anæsthetic, and that the boy experienced no pain; that the second was removed without ether, and was very painful. It occurs to me that Dr. Long's conduct in this case proceeded either from the fear of keeping the patient under the anæsthetic too long, or from a desire to test the action of the ether. The latter view is made plausible from a statement of Long lower down.

If Dr. Long had promptly made public the results of his work, American medicine would have been spared the most tragically interesting chapter in its history. But, under the circumstances, he pursued a course both natural and commendable, and his reasons, as given by himself, were entirely cogent. He knew that he was the first to make the discovery, and he anticipated no controversy. His operations had all been of a minor character, and he only waited for an opportunity to test his anæsthetic in capital surgery. But cases of heroic surgery were not common in those days

*These operations were done in the presence of Jas. E. Hayes, A. T. Thurmond, W. H. Thurmond, E. S. Rawls, afterwards a practicing physician, and perhaps others. Certificates of these gentlemen are before me, besides also those of Venable's family.—L. B. G.

in the practice of a young physician, in a thinly settled community, one hundred and thirty miles from the nearest railroad. As far as it went, his work was well known in the small sphere in which he moved. Before me are several certificates—three of them from physicians who were prominent in that section at that time—to the effect that “Dr. Long’s operations were public and notorious in and near Jefferson, Jackson county, in the year 1842;” that he “made no attempt to conceal the character of the article inhaled, nor made any request that the results of his operations be kept secret.”

Dr. Long’s delay in going into print with his cases is thus explained by himself:*

“I was anxious, before making my publication, to try etherization in a sufficient number of cases to fully satisfy my mind that anæsthesia was produced by the ether, and was not the effect of the imagination, or owing to any peculiar insusceptibility to pain in the persons experimented on. At the time I was experimenting with ether, there were physicians high in authority, and of justly distinguished character, who were the advocates of mesmerism, and recommended the induction of the mesmeric state as adequate to prevent pain in surgical operations.† Notwithstanding thus sanctioned, I was an unbeliever in the science, and of the opinion that if the mesmeric state could be produced at all, it was only in those of ‘strong imaginations and weak minds,’ and was to be ascribed solely to the workings of the patient’s imagination. Entertaining this opinion, I was the more particular in my experiments in etherization.”

In the meantime, Wells and Jackson and Morton were at work. With some assistance from one another, they arrived successively at the anæsthetic properties of nitrous oxide gas and sulphuric ether; and Morton, with an eye single to glory and business, secured a patent on ether under the name of *Letheon*. In the Massachusetts General Hospital, Boston, October 16, 1846, Morton administered his “*letheon*”

* Extract from an unpublished (?) paper read before the Medical Society of Georgia, April, 1853.

† Dr. Long here refers probably to Dr. Gibbs, of South Carolina, who at that time, was especially prominent among the class of physicians above alluded to. He, and others, claimed to have “witnessed operations on patients mesmerized, and declared that mesmerism was the *ne plus ultra* needed to kill pain in surgical operations.”—L. B. G.

to a patient for Dr. J. C. Warren, and a tumor of the neck was successfully removed. Other operations followed in quick succession by the hospital staff. They were described in the *Boston Medical and Surgical Journal*, November, 1846, by Dr. Henry J. Bigelow. October 27th, 1846, Jackson and Morton published their letters patent, announcing the discovery of "letheon" as an anæsthetic; but their "letheon" was nothing more nor less than sulphuric ether.

Now began the celebrated "Ether Controversy," which I will pass over rapidly. Wells claimed the honor for himself, but having failed, both at home and abroad, to receive the recognition he sought, he ended his life by suicide Jan. 14, 1848.

When Dr. Long saw that he was anticipated in the matter of publication, he began at once to collect the evidence in proof of his own work. He obtained the affidavits of those operated upon, with dates, the sworn statements of witnesses and of those who knew of the operations, and his first article appeared, with some of these certificates, in the *Southern Medical and Surgical Journal* (Augusta, Ga.), Dec., 1849.

In 1852, a bill was introduced in Congress to purchase Morton's patent for \$100,000. This was opposed by Dr. Charles T. Jackson and the friends of Wells. Dr. Long's claims were also presented, and Sims says they were formidable enough to block the movements of Morton to get the appropriation. In 1854, Jackson made a visit to Long in Athens, and having satisfied himself as to the latter's priority in the use of ether, proposed to him (Long) to lay their claims conjointly before Congress as the real discoverers of anæsthesia. At the interview between them, Judge Andrews, of Madison, Ga., was present by Dr. Long's request. Dr. Long declined all of Jackson's suggestions, and instructed Senator Dawson, of Georgia, to make no compromise, but to place his claims solely on their merits. The matter drifted along with true congressional slowness until it was finally lost in the preparations for war. Morton was

greatly disappointed at not receiving the reward from Congress. In New York, July 15, 1868, having fretted himself into a congestion of the brain, he drove furiously up Broadway and leaped from his buggy near Central Park. He was taken up insensible and carried to St. Luke's Hospital, where he died an hour later. It was not long before Jackson was committed to an asylum, hopelessly insane. After some years of confinement, he died, August 28, 1880.

The ether controversy was never re-opened. Dr. Long continued to practice his profession in Athens, and enjoyed a good patronage. Of course he regretted not having received the recognition he was sure he deserved, but his life was not saddened thereby. In regard to his discovery of anæsthesia, he had often said, "My only wish about it is to be regarded as a benefactor of my race." While on a visit to a patient June 15, 1878, he was stricken with paralysis, and, without regaining consciousness, died the next day. The Georgia Legislature has agreed to place his statue in the National Gallery of Statues in Washington. Dr. Long combined excellently the noblest qualities of the physician with the highest attributes of the gentleman. He knew that the credit of the discovery was properly his; but through all the long controversy he was content to rest his claims on their merits alone, and conducted his case with dignity and honor. He claimed nothing for himself that was not his; his character was known of all men, and was above reproach; he was modest, honest and truthful to the last degree; and he "kept the covenant of his heart's true life till his days were numbered."

Paul found in his travels many altars erected to as many gods, and in Athens another, "To the Unknown God." So the tourist can see, in Hartford, Conn., a bronze statue erected to the memory of Horace Wells; in Mt. Auburn Cemetery, Boston, a marble shaft to W. T. G. Morton; in Paris, a life-size marble statue of Crawford W. Long; and in Boston, a monument of white marble dedicated "To the Discoverer of Anæsthesia." It bears no name, but to one familiar with history it recalls the sad story of hopes that

were disappointed, ambitions that were defeated, and lives that were lost, through their connection with the most humane and beneficent discovery of modern times.

Only one word more. Dr. Long's priority in the use of ether is beyond question. His discovery was the logical outcome of certain observed phenomena, and he proceeded to develop it in a scientific way in order to make assurance doubly sure. In the meantime, others less philanthropic gave a patented name to a common article, and, in some haste, announced a great "invention," which, later, they tried to sell for money. But, thanks to Dr. Sims' clear presentation of the evidence, the medical profession generally, I believe, have recognized the precedence of Dr. Long's discovery.

It is a little surprising, therefore, that the author of a popular text-book on surgery should say, "I hope I may be pardoned for saying that the evidence in Dr. Long's favor seems to me quite inconclusive." I hope I may be pardoned for reminding him that the blindest persons *are those who will not see*.

A late writer in the *Medical Record* (Jan. 7, 1893) has read history to such little purpose as actually to state that Dr. Long himself never claimed to have "demonstrated painless surgery by etherization." Will the gentleman from New England kindly tell us, then, what was Dr. Long's object in going before Congress with his case when he saw that others were claiming the credit of the discovery? He might also explain Dr. Long's refusal to accept Dr. Jackson's proposition, and his instructions to Senator Dawson, above referred to.

People, and especially the inhabitants of those cities and sections where new discoveries make late impressions, part with their long-cherished opinions with great reluctance, and then only when the evidence becomes such as to convince the most unwilling. The present instance will be no exception. It is only to be expected, therefore, that there will remain some persons whose understandings will not be enlightened.

141 Peachtree Street.

ART. II.—Personal Experience in Observing the Results of Good and Bad Sanitation in the Confederate States Army.*

By BEDFORD BROWN, M. D., of Alexandria, Va.

PRESIDENT SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION; EX-PRESIDENT AND HONORARY FELLOW MEDICAL SOCIETY OF VIRGINIA, ETC.

During the first two years of the late war, the laws of hygiene were greatly neglected in the conduct of the army of the Confederate States. As a result of this neglect of the common laws of health, there was necessarily an enormous amount of disease and a high rate of mortality. This neglect of proper sanitary arrangements was not so much due to a want of intelligence or scientific knowledge or a sense of their necessity, as to the unusual state of confusion incident to a condition of revolution in its incipient stages, and also to the general prevalence of the idea that the war would be a brief one. But as time rolled on, and the war assumed larger and more gigantic proportions, and the end appeared more distant, the necessity of systematic attention to hygienic affairs grew more apparent as a means of maintaining an army in full force and vigor for prosecuting a great war. Hence, military hygiene as the war advanced became more and more a part of the army organization, and the inevitable result was not only an improvement in the health of the soldier, but an improved capacity on his part to withstand hardship, exposure and privation.

In the commencement of this paper, I desire to show you that an army located in the most salubrious climate, in a position of great altitude, with abundant supplies of clear spring water, surrounded, apparently, by circumstances the most favorable to human health, from want of proper attention to the laws of hygiene, may become infested with the most deadly epidemic diseases.

*Read before the Section of Military Medicine and Surgery of the Pan-American Medical Congress in Washington, D. C., September 6th, 1893.

In the autumn of 1861, an army consisting of about 17,000 Confederates, under General Robert E. Lee, was stationed for two or three months under circumstances of this kind on the summit of the Alleghany range, in West Virginia, in front of General Rosecranz. The position of General Lee was regarded as peculiarly favorable to health, and as apparently free of all septic influences, having a surface drainage that was perfect. But notwithstanding all these natural advantages, this army was desolated by malignant diseases, as typhoid fever, septic dysentery, and pneumonia. All cases of whatever kind rapidly assumed the typhoid type, indicating the gravity of the septic influence. In this army of about 17,000, there were at least 4,000 cases of disease, with an enormous mortality. We ascertained that the cause of the epidemic was purely excrementitial in character.

The entire army had been, in the absence of all sanitary arrangements, permitted indiscriminately to use the surface of the earth surrounding the camp for the deposit of the excreta of the sick and the well. This excrementitial matter was washed daily by copious rains into the springs and fountains of our water supply, and was a constant source of pollution. The water as it gushed from the mountain valleys was beautifully clear and deliciously sweet, but when tested was found to contain a large amount of organic matter.

In this connection I will cite another incident illustrating the results of prompt and thorough attention to the laws of hygiene in an army suffering from serious septic disease, caused by unfavorable surrounding influences. During the months of August, September, and October, in the year 1862, in which the temperature ranged very high, the brigade of which I was senior surgeon was stationed at Drewry's Bluff, on James River, Virginia, after the great Seven-Days' battles around Richmond. The locality was an open, flat, badly-drained country that had been previously occupied by troops, and much of it was literally covered with human and animal excreta, which had from surface drain-

age been, from time to time, filtered into the drinking fountains. Within a week, during this intensely hot season, an epidemic of typhoid fever, dysentery, and diarrhœa was developed that threatened seriously to decimate the command. A large force of men were detailed daily with suitable implements, and not only the camp and surrounding country were thoroughly cleaned, but the springs and streams were also cleaned and purified and kept in a scrupulously cleanly condition, and in addition, ample privy vaults were excavated at a distance below the level of the water supply. Within a reasonable period, by means of these sanitary measures, this epidemic was effectually arrested, and the brigade became a model for healthfulness.

The systematic and practical hygiene of camps and armies is an interesting and vital question. It is the very foundation of strength and efficiency of an army. It has fallen to my lot to observe and attend an army without proper hygienic advantages, and to see its crippled, dejected, spiritless, disorganized, inefficient condition, and to compare it with an army whose state of hygiene was strictly attended, and to observe the vigor and force of mind and body, the dauntless spirit, the endurance of hardship and exposure of its soldiers.

At this stage of our progress I propose to present for consideration my personal experience in the Confederate service in the practical methods adopted for improving the sanitary condition of camps and promoting the health of armies.

In the preparation of this paper I have endeavored to discard all theoretical ideas and adhere strictly to facts based upon my own personal experience.

In considering the hygiene of armies, there are three subjects which must elicit our constant interest and study: (1) the condition and the quality of the *water we drink*; (2) the *air we breathe*, and (3) the *food we consume* and its methods of preparation.

In the Confederate service, experience proved that an army in motion or active service enjoyed better health, and

had a smaller death list from disease, than one stationary in quarters. Even with the most scrupulous attention to hygiene, there is an accumulation of a certain amount of *debris*—vegetable, animal, and excrementitial—that pollutes the common carriers of disease germs—water and air—of a great stationary body of men.

Then, again, day and night a stationary army is constantly inhaling an atmosphere that has passed through the lungs of thousands of healthy and diseased men an innumerable number of times.

Another reason is, an army shut up in quarters suffers for want of active physical and mental exercise. On the other hand, an army in motion has the advantages of breathing a fresh air every moment while in action. It has also the advantage of drinking from fresh, unpolluted fountains of water. There is no accumulation of *debris* to contaminate either.

Furthermore, the functions of digestion, assimilation, and nutrition are promoted by active physical and mental exercise.

Finally, active mental and physical exercise is always cheering to the spirits of an army. The corps of Stonewall Jackson, though almost constantly in motion, subjected to all the hardships, exposure, privations, and fatigue incident to long and forced marches, presented the smallest sick list and bills of mortality of any corps in the Confederate army. These important facts teach us a lesson in military hygiene that is of value.

In devising and executing my sanitary arrangements for the protection of the health of that portion of the army under my immediate medical supervision, when in quarters or stationary, I endeavored, as far as practicable, to imitate an army in motion. In other words, I directed scrupulous attention to cleanliness, changing the location of tents and quarters every twenty-four hours in warm seasons, and to cleansing the fountains of our water supply every twenty-four hours, so as to insure pure air and water. I discovered by practical experience that an army employed

was far more healthy, happy, and contented than one in idleness. Idleness breeds disease, discontent, and death.

My habit was, when I found my sick list increasing, to advise all hands, except the sick, to be put to work. It was not material what kind of work, so that it gave employment to mind and body. I had a splendid regiment of Southern young men under my charge at one time in 1861, which suffered fearfully from the effects of nostalgia, or *homesickness*. They had never been from their homes except at brief periods; and while stationed in quarters the effects of *homesickness* became truly disastrous and alarming. These young men, the pets of their families and the life of their comfortable homes, in camp life would absolutely sink down into a state of listlessness and apathy, with the entire loss of spirits, hope, appetite, and ambition, and would fall an easy prey to all the diseases of army life.

It was ordered that every man in this regiment daily, from morning till night, be put to work with axes, hoes, rakes, cleaning up camp, changing the location of tents every day, cleaning up fountains, draining swamp lands, chopping and hauling wood, and very soon the good effects on mind and body were marvellous. When there was no work I studied to make work, and I was amply repaid.

I will here present my method of camp hygiene in detail, but as briefly as practicable.

The absorbent powers of the earth's surface, occupied as a camping ground by a large body of men, and covered by tents, so as to intercept the rays of the sun, are simply enormous. Under these circumstances, the earth absorbs rapidly the exhalations of the human body and the germs of disease, and then in turn exhales them, to be again inhaled. The earth under a house-tent occupied by from four to six men, will absorb sufficient effluvia in a few days to poison the earth and atmosphere under those tents. On entering the door of one of those tents in the morning at sick call, the atmosphere will be found disgustingly fetid and offensive. The house-tent, when its sanitary condition is neg-

lected and permitted to occupy one position for days and weeks, is responsible for an infinite amount of disease; but at the same time, by proper sanitary care, it can be made not only comfortable, but wholesome. In this particular, I suggested a rule that was ever afterwards carried out rigidly in our command, and resulted in infinite improvement in the health of the soldiers. In hot seasons, every tent was struck after breakfast, and in cold seasons twice every week, its location thoroughly cleansed, and the tents placed on the streets, and the former sites exposed to the action of the sun's rays and the atmosphere for twenty-four hours. In this arrangement a double purpose was accomplished—the one hygienic, the other to give useful employment to the soldier. All *debris* collected was carted off and burned, so that no cause for septic influence should remain. The next day the entire process was reversed. By the rigid practice of this system our air and water were preserved uncontaminated.

The second rule in importance adopted was the punishment of every man who used the surface of the earth for the deposit of excreta, instead of the privy vaults always located below the level of our water supply and at a distance from camp.

The excreta of all ill patients with typhoid fever, pneumonia, dysentery, diarrhœa, and measles was deposited in boxes filled with dry earth, to be carted off to the privy vaults twice daily. For the disinfection and deodorization of excreta, I found the dilute sulphuric acid, when obtainable, efficient, and then the whole covered with dry earth. At the same time, all horse stables and cattle pens were invariably located at a distance from, and below the level of our water supply. By these sanitary arrangements we slept every night upon fresh ground; we had pure water for drinking purposes, and pure air for breathing purposes. We had a clean encampment—almost as clean and sweet as a fresh camp of an army in motion, and we had ample exercise for mind and body. By this unremitting attention to the laws of health, our command became a model of

healthfulness and cleanliness. I became convinced that nothing but the direct action of solar light and heat were capable of destroying the infectious exhalations of the human body, either sick or well, when absorbed by the earth's surface, on which these bodies habitually repose. I found that at least twenty-four hours' exposure was necessary to accomplish this object.

I instituted a series of simple experiments to test this matter. When each tent was struck a small portion of earth in its enclosure was excavated to the depth of two inches, and when applied to the nose after a tent had been erected for several days, was always found to give forth a more or less offensive odor. The action of the solar heat and light invariably dissipated these unpleasant odors.

Education, intelligence, refinement among soldiers exert a marked sanitary influence over their general health. The Confederate Army was composed of companies and regiments of the most opposite extremes in these particulars—some educated and refined in the highest degree, while others were steeped in the profoundest illiteracy and ignorance. To reconcile these diverse elements was a difficult matter. There was far less disease among the educated and refined than among the opposite classes. The former resisted the attack of disease more certainly, and recuperated from its ravages more readily. A company of soldiers, who made their signatures to the pay-roll largely with cross-marks, was sure to suffer much from disease.

The educated had more pride, self-respect, good taste, and ambition in attending to all the hygienic laws of life, and in the preparation of more palatable, digestible, nutritious varieties of food: while the illiterate volunteer could not be made to comprehend the dangers of dirt and filth, or the importance of cleanliness in all things pertaining to health and life. Neither could his dull intellect understand why one method of preparing his food should be more conducive to digestion and health than another. He burned his bread and fried his food saturated with grease, and suffered

from indigestion, colic, and diarrhœa, but was ignorant of the cause.

In the practical hygiene of armies, a question of vital importance is the disposition of all excrement, human and animal, so as to prevent pollution of air and water. This is eminently true of the excreta of patients with typhoid fever, dysentery, and diarrhœa.

In the Confederate service, I at once saw that the more scrupulous attention that was paid this subject the better the health of the command; and as certain as it was neglected the army suffered in proportion with septic disease.

After one of the great battles around Richmond, in the heat of summer, my brigade was assigned to a location covered with human and animal excrement, and in twenty-four hours there were hundreds of cases of septic diarrhœa.

In military as in civil life, it is surface drainage that pollutes our water supplies, and therefore, in armies and camps there should never be permitted accumulations on the surface of vegetable, animal, or excrementitious material. In my own experience, I found that absolute cleanliness of a camp was always practicable by excavating privy vaults at a distance located below the water supply level and the rigid enforcement of their use by the men.

The artesian well from one to three hundred feet deep, if practicable, furnishes probably the most certain protection to drinking water against the contamination of surface drainage. It is my opinion that the artesian well sunk rapidly by the modern facilities for constructing such means for drinking water in camp would be a step in the direction of economy in the health and life of an army.

During the winter and spring of 1862, I was placed in a favorable position to observe the diseases of volunteer recruits, and the best methods of preventing their extension. During these five or six months I acted as Surgeon of the Camp of Instruction near Raleigh, N. C. In that space of time some ten thousand volunteers under the conscript law passed through the camp. Of these about four thousand contracted measles. I found that when a recruit had mea-

sles and was retained in camp or sent to the front, he invariably passed through one or more of the sequelæ of the disease, as diarrhœa, dysentery, bronchitis, pneumonia, and not unfrequently typhoid fever; so that he was either on our hands as an invalid, or, in the process of disease, finally died. To prevent those untoward consequences, and for the purpose of breaking in upon this chain of morbid tendencies, I determined to suggest a universal system of furloughs for every man who had passed through an attack of measles of from two to three weeks. Consequently during this period there were furloughed from this camp more than three thousand soldiers, and the results were admirable. This method had the effect of absolutely correcting the evil. The diseases consequent to and traceable to measles cost the Confederate Army the lives of more men and a greater amount of invalidism than all other causes combined; and if this method of general furloughs could have been adopted after an attack of this disease, it would have resulted in preventing a vast loss of life and time, and would have proven a decided means of economy.

In the month of February, there appeared in this Camp of Instruction an epidemic of cerebro-spinal meningitis that threatened at one period to disorganize the camp. The type of the disease was so exceedingly malignant as to prove fatal in three-fourths of the cases in opposition to the most approved method of treatment then known. It appeared first in a company of recruits who came from a certain county in the State of North Carolina, where the disease had been prevailing as an epidemic, and then rapidly extended to other recruits in the camp. The disease appeared in several different forms, as the comatose, the convulsive, asthenic and collapsed, and the ataxic types. The course was usually rapid when fatal, and the few cases that recovered convalesced slowly, and ever after remained unfit for military life. How to prevent the extension of this epidemic, more fatal than Asiatic cholera, became a serious problem for solution.

In relation to the prevalence of this epidemic and its pe-

culiar history, I desire here to note two important points. One is that the disease was imported from a section where it had previously prevailed, and that it was eminently infectious. All recruits who came in contact with these patients suffering with the disease from this infected district contracted the disease. Even those inhabiting tents in the vicinity of the sick contracted it.

The second point is, that by a rigid system of quarantine, or, in other words, prompt separation of the sick as soon as attacked, and their absolute isolation in a camp at a safe distance, were the only means capable of arresting an epidemic more fatal than Asiatic cholera.

Occupying only a secondary place to measles, diarrhœa was the bane of the volunteer recruit of the Confederate Army. Nine-tenths of all new recruits suffered from an attack of diarrhœa. While these attacks were not in themselves fatal, they were the cause of a large amount of invalidism, and laid the foundation for other diseases that were fatal.

How to prevent these cases of camp diarrhœa, and render the acclimatization to camp life easy and healthful, was a serious question of hygiene. The new recruit, when he entered the army, left behind him his accustomed system of diet and took up a new one, entirely and radically different. He left a mixed diet, vegetable and animal, and a fair method of preparing it, and took one largely animal, usually very badly prepared, which was resented by his digestive organs. He left an animal diet cooked in the boiling pot, the baking oven or the *stew-pan*, and substituted the *frying-pan* for all of these.

The undisciplined Confederate naturally sought the quickest and readiest method of cooking his meals, and that was by the *frying-pan*. This culinary utensil cost the Confederate Army a vast amount of invalidism and indirectly many lives. It would ruin any army.

But as time wore on and the mind of the soldier gained wisdom by experience, the *stew-pan* was substituted for the *frying-pan*, and then animal and vegetable food, when ob-

tainable, were prepared together into a mass that was not only more savory, but far more digestible and wholesome, and then much of this diarrhœa became a thing of the past.

My experience in the treatment of the wounded, of infectious cases, as gangrene, erysipelas, typhoid fever, pyæmia, in hot seasons, under tent flies alone, in high, dry locations, under shady groves, where the breezes had full sweep, was far more favorable in result than in crowded hospitals or tents.

Crowded hospitals, either in houses or tents, are the hot-beds for the culture of the infectious germs. When practicable, the wounded of an army should be placed, in hot weather, under tent flies, or simply under the shade of trees in clear, warm weather. I have thus treated infectious diseases, as typhoid fever, erysipelas, gangrene, with far better results than in crowded hospitals. On one occasion, while treating some thirty cases of typhoid fever in houses, the cases proved very intractable, and several were fatal. These patients were removed to a large grove, under the cool shade of which they enjoyed the refreshing breezes, while at night they were protected by tent flies, and the earth around kept scrupulously clean, and the results were excellent.

ART. III.—The Use of the Catheter During Labor.

By **R. A. LANCASTER, M. D.**, of Gainesville, Fla.

EX-PRESIDENT FLORIDA STATE MEDICAL ASSOCIATION, ETC.

The bladder should be catheterized at the beginning of the second stage of labor in every accouchment.

The principle enumerated is probably not new to a majority of the profession, but that a large number may profit by following the suggestion, I am convinced. I have been surprised myself to see the large number of cases of tedious and protracted labor brought to a speedy and happy termination by this simple proceeding.

A soft catheter should always be used, and the assertion

of the patient or nurse that "the water had been passing all day" is no contra-indication to its use. This dribbling may be the amniotic fluid, or it may be the overflow from a distended bladder. I can recall not less than six cases in the last few months where I have been sent for on account of prolonged labor, where the introduction of a soft catheter (which should always be done between the pains) has drawn off from eight to twenty-four ounces of water, and resulted in a speedy termination of labor.

The negroes, and many of the poorer whites, in my section, depend upon the services of midwives, unless something unusual calls for a physician's services. This is why I have seen so many prolonged cases relieved by emptying the bladder.

In many cases where the child's head fails to engage—the pains seeming inefficient, short and unsatisfactory—we are importuned by patient and friends to apply forceps and deliver, the trouble can often be removed by a catheter.

I am persuaded that almost all cases of vesico-vaginal fistula might have been prevented by the timely use of the catheter.

I feel that it is scarcely worth while, in this enlightened age, to speak of the necessity of having the instrument aseptic. That, of course, is taken for granted. If these lines will induce even one practitioner to resort more frequently to the use of the catheter in tedious or difficult labor, I shall be glad that I have written them.

Phosphorus Pills.—Having been requested to give my opinion on the action of the American sugar-coated pills, prepared by the firm of Warner & Co., of Philadelphia, U. S., and particularly on those containing phosphorus at the dose of $\frac{1}{100}$ and $\frac{1}{4}$ grain extract of nux vomica, I am able to certify with entire truth that I found this remedy very useful in many cases of diseases whose nature was principally nervous, and in cases of anæmia and general debility.

ART. IV—The Therapeutic Application of Chloroform in Labor.*

By JOHN N. UPSHUR, M. D., Richmond, Va.,

PROFESSOR OF MATERIA MEDICA AND THERAPEUTICS IN MEDICAL COLLEGE OF VIRGINIA;
HONORARY FELLOW OF THE MEDICAL SOCIETY OF WEST VIRGINIA, ETC.

Since the primeval curse fell upon our race, and pain and anguish have been the invariable and dreaded accompaniments of man's entry into the world, to soothe woman's sorrows and conduct her safely through the crisis, are objects worthy our highest effort, and one to be sought for with commendable devotion.

To accomplish these ends, the administration of chloroform has become routine practice, and the consensus of opinion, from a very large number of obstetricians, is in favor of its safety, when thus exhibited. Careful observation for many years has tended to make me question its utility in many cases; nay, to convince me that oftentimes it *adds* to the peril and prolongs the trial.

Loyal devotion to true obstetric science demands that chloroform in labor should be exhibited just as *other therapeutic* agents in the treatment of other maladies. We forget that delivery is not a pathological function; that it becomes pathological only when conditions arise which convert a eutocia into dystocia, or when the physical conformation of the pelvis is such as to prevent the accomplishment of natural delivery by mechanical obstruction from errors in the pelvic conformation, malposition of the child, or monstrosity. When labor has become pathological in character, and operative interference, manual or instrumental, is demanded, with the dangers of exhaustion from prolonged agony, or the addition of surgical shock, the case passes to the domain of the surgeon, so far as the *unquestioned exhibition* of chloroform is concerned, just as an anæsthetic is demanded in any surgical procedure as a safeguard to life; or where the condition of the mother is such that her life is imper-

* Read before the Obstetric Section of the Pan-American Medical Congress, September 6th, 1893.

illed by the supervention of convulsions from existence of any of the systemic conditions, which, predisposing to such complication, become active factors so soon as the stimulus of pain, or the concentration of poison to the nervous system, sets in motion the morbid phenomena, which manifest themselves by an outward explosion, jeopardizing the life of the infant and of the mother.

It is not with conditions such as these that I purpose dealing, but with chloroform therapeutically applied as a *causative* factor, either predisposing or active, in transforming this physiological function into a condition of some form of dystocia, making aid or interference necessary to the safe delivery of the woman.

The problem, therefore, resolves itself into answers to these questions:—In what cases should chloroform be administered? At what stage of labor? What dangers arise in consequence? At what stage do these complications arise? What the best means of combatting them? And, finally, these propositions being true, *is it justifiable to administer chloroform in natural labor, progressing with satisfactory rapidity?*

To satisfactorily deal with these queries, we must discuss the physiological action of chloroform so far as it bears upon this subject. In the first stage of the *administration* of chloroform, we have its stimulant effect. The second is the stage of narcosis. In the third stage, the functions of the spinal cord are abolished, as are those of the brain—this the surgical stage; and in the fourth, we have the condition of complete paralysis—death usually by overpowering the respiratory centre first. The modes of death are from reflex irritation of the cardiac ganglia; from epileptiform syncope in the stage of stimulation; from paralysis of respiration; from paralysis of heart; and, finally, from depression by the chloroform narcosis and shock. *Chloroform diminishes the excitability of the muscular system and its capacity for work. If prolonged, it exhausts muscular irritability. It interferes with oxidation of the blood, and thus becomes toxic*

to the *fœtus*. Its stimulant action on the vaso-motor centre is doubtful.

Now, as a practical deduction from these *facts* as to the action of chloroform, let us apply them to a solution of the queries as enunciated before. As to suitable cases for the administration, we need not consume time in discussing; every skillful and experienced obstetrician will point to those cases in which the pains are nagging and exhausting—in rigid os, in great nervousness and restlessness. I think, too, that except, as just stated, it should not be administered until the *second stage* of labor is well established, and at the latter part of that stage, and *withdrawn* so soon as the occiput has passed the ostium vaginæ.

The most serious question is as to the dangers arising from the exhibition of chloroform in labor, and it is with this question that I would deal with greatest emphasis.

Note the danger from *reflex* irritability, with incomplete anæsthesia; it is at least worthy of investigation, that if fatal influence from chloroform does not manifest itself here, still its effect on the heart, through the cardiac ganglia, may be potent enough to, at least, predispose to hæmorrhage, or to weakened heart-action, during convalescence, with the condition of debility consequent upon it. But the obstetric stage is the beginning of *narcosis*; it is difficult to keep the patient at this point. Lack of appreciation in what is going on interferes with voluntary assistance. One of its physiological effects is to diminish muscular excitability, to interfere with muscular capacity for work; pains are consequently less potent and effective in expelling the child; there is much greater muscular tire, and the natural consequence is that when the second stage is complete, danger of hæmorrhage is much greater from incomplete condensation of the uterus, and I have often seen it occur. The uterus is left in such condition as to make *subinvolution*, with all the *ills that follow in its train*, almost inevitable.

The spongy condition of the womb makes the patient much more liable to septic infection. Not only so, but often have I seen labor suspended; nor on the withdrawal of the

chloroform did the uterine pains return with desirable efficiency; evidently its effect on the uterine muscle was toxic in character, and instrumental delivery became a necessity, the agent having transformed a simple physiological process into a pathological one, thus adding to the peril of the mother. The interference with oxidation of the blood endangers the life of the child, and I make bold to assert my belief that its use in natural labor *increases the percentage of still-births*. Nor are these the most serious risks; though few deaths have been reported from chloroform in obstetric practice, it is a question if death supervening in many cases within twenty-four hours after delivery, and reported as heart-clot, etc., may not have been due to the depression from long-continued administration of chloroform, plus the shock of labor. In the cases where uterine contraction is not interfered with, and the woman holds her breath, fixing the chest-wall to more efficiently bear down, she is put in a most favorable condition for the occurrence of epileptiform syncope, when chloroform is being administered, and the retention of carbonized blood in the brain, may, under such conditions, overwhelm the nervous system. The dangers from chloroform exhibition are most likely to manifest themselves, however, at the close of the second, or during the third stage of labor; and here post-partum or accidental hæmorrhage is the most important, and may be the focus from which may radiate other serious evils.

I would lay down the proposition as an axiom, that *when-ever* chloroform has been administered, a full dose of ergot should be given so soon as the head is delivered, or the second stage of labor completed. I have never regretted giving the ergot, and remember *no case* in which it was omitted that I did not repent the delinquency. I would also suggest that it is safe practice to give a full dose of quinine (gr. x) at the beginning of the second stage of labor when chloroform is to be exhibited, or belladonna, or one or more doses of nitro-glycerin; especially will this last tend to antidote the nausea following chloroform administration. The hypodermic injection of atropine (gr. $\frac{1}{120}$) or sulph. strychn-

nia (gr. $\frac{1}{60}$ th) will undoubtedly add to the safety of the patient.

We must not lose sight of the fact that in the obstetric use of chloroform (which is usually conceded as the safest field for the use of chloroform), the patient is *much longer* under the influence of the anæsthetic, and that the stimulus of constantly recurring uterine contractions, of a painful character, *which are supposed* to antidote the ill effects of the chloroform by constantly arousing the patient, may be absent, or fail to exercise the stimulant effect usually a consequence of pain.

In the light of the foregoing facts, I most earnestly avow my belief that we, as physicians, should place chloroform upon the same platform as other drugs; not be influenced by our sympathies aroused by the pleadings of patients, or the fashionable routine practice of the day, but initiate and sustain a much needed reform in our obstetric work—chloroform being administered, as other agents, when the indications in the case imperatively demand it, not unless. He is a bold man who, invading the domain of nature, interferes with her physiological processes and places the wife and mother in a position of increased peril, and perchance the shadow of a fatal issue, or, at least, a life of invalidism and suffering, where before the home was irradiated with the effulgent rays of the sunlight of true and unalloyed happiness.

206 East Grace Street.

CHEMICAL FOOD is a mixture of phosphoric acid and phosphates, the value of which physicians seem to have lost sight of to some extent, in the past few years. Robinson-Pettet Co., to whose advertisement (page 28) we refer our readers, have placed upon the market a much improved form of this compound, "Robinson's Phosphoric Elixir." Its superiority consists in its uniform composition and high degree of palatability.

ART. V.—Causes of Typhoid Fever.*

By **VICTOR C. VAUGHAN, Ph. D., M. D.,** of Ann Arbor, Mich.,

DEAN MEDICAL DEPARTMENT, MICHIGAN UNIVERSITY, ETC.

There are three theories concerning the nature of the germ or germs which cause typhoid fever. The Germans believe that this disease is always caused by a single germ, which has well marked, characteristic and invariable morphological properties. This is the germ of Eberth, or, as it is sometimes called, the Koch-Eberth germ. This bacillus forms an invisible growth on the potato, and this property is stated by Fraenkel and others as characteristic. The Germans believe that typhoid fever is always caused by this germ and by no other.

On the other hand, some of the French bacteriologists believe that typhoid fever is caused by the bacillus coli communis, which is normally present in the intestines, and which, under certain conditions, acquires especial virulence, sets up inflammatory action in the wall of the intestines, penetrates the walls, and passes to the mesenteric glands and to the spleen.

According to the Germans, the drinking of sewerage will not cause typhoid fever unless the sewerage be contaminated with the specific bacillus of typhoid fever; according to the other view, the drinking of sewerage, even when contaminated only by the excreta from healthy persons, is dangerous and may be followed by the development of typhoid fever.

The third theory concerning the nature of the germ or germs which may cause typhoid fever is one for which the speaker is responsible. I believe that there are several germs which may cause ulceration of the intestines and an elevation of temperature in the lower animals. The germs obtained from the spleens of persons dead from typhoid fever, in this country at least, do not show uniformity in growth.

* Notes of Remarks made in Section of General Medicine, Pan-American Medical Congress, Washington, D. C., September 6th, 1893.

For the last twelve or fifteen years I have been called upon officially to investigate nearly every epidemic of typhoid fever which has appeared in the State of Michigan. In all cases the water supply has been examined, and during the last four years this examination has included a thorough bacteriological study. In no case have I been able to find in the water a germ wholly identical with that of Eberth. During the last year I have in each epidemic obtained the spleen of one or more persons whose death was caused by the fever, and in this organ I have found germs identical with those found in the water, but not identical with the Eberth germ.

I think that the spread of typhoid fever, and its unexpected appearance in many places, may be accounted for, in part, at least, by the fact that most of us are probably immune to the disease. All of us who have practiced medicine in country places have seen women and children at farm-houses, far removed from evident sources of contagion, stricken with the disease. The usual explanation is that some tramp, with walking typhoid fever, has gone through the country, has visited the various outhouses, and has polluted the drinking water supply. A more reasonable explanation is that some members of the family have visited places where the water was contaminated, have taken the typhoid germs into the body, and in this way the water has been contaminated by the stools of a person in whom the disease has not appeared. With the two thousand deaths from typhoid fever in 1891, and with the hundreds of thousands of people drinking from a common water supply, it certainly must be considered as highly probable that many besides those who were stricken took water containing the germ. This germ may have passed from the bodies of the people drinking the water without causing any apparent effect, and in this way the disease may have been scattered to remote parts of the country.

ART. VI.—A Contribution to the Study of Club-Hand.*

By REGINALD H. SAYRE, M. D., of New York, N. Y.

Club-hand is very much less frequent than club-foot. It may be acquired as a result of paralysis of certain muscles, or contraction of others from central nervous irritation, by cicatrices resulting from burns, or it may be due to injuries to the bones of the hand or fore-arm, or it may be congenital.

Of the first variety, J. K. Young reports a case where an infant had the left side of the head injured at birth. A large hæmatoma formed here, and subsequently the right hand was markedly adducted, and the fingers and thumb flexed, and the hand flexed at the wrist almost at a right-angle with the fore-arm in the radio-palmar position. The hæmatoma was incised, profuse bleeding followed, and subsequently the deformity gradually subsided, having been caused by the irritation produced by the hæmatoma.

Bilhaut reports a case of club-hand due to fracture of the ulna at birth, with subsequent loss of bone from suppuration, giving rise to inequality in the length of the bones of the fore-arm, causing a sharp deflection of the hand towards the ulnar side.

The congenital club-hands differ widely from the above-described cases, and may be divided into three varieties: 1st, Those where the skeleton is complete and well-formed; 2nd, Where the skeleton is complete, but ill-formed; and 3rd, Where the skeleton is incomplete and distorted. Various writers say that the majority of cases come under the third head, but the author's personal experience does not agree with this.

In many cases, club-hand is associated with club-foot or some other abnormality of development. The direction of the deformity may be either in flexion, extension, abduction or adduction or a combination of the two, the most frequent being the radio-palmar variety.

* Specially prepared abstract of paper read before the Pan-American Medical Congress, Washington, D. C., September 6, 1893.

In those cases where all the bones of the hand and forearm are present, the prospects of a good result are more favorable than where there is absence of one or more bones; and in these milder cases, when seen early, it is sometimes possible to restore the hand to proper shape and function by constant manipulation and rotation of the parts, which are to be held in their improved position by some fixed dressing, as the plaster-of-Paris bandage—the dressing being changed from time to time as the deformity is reduced.

Section of the tendons, ligaments or fascia may be necessary, if the case is not seen in the early stages. Many of these structures are so situated as to make open section preferable to the subcutaneous method; and if the flexor tendons have to be divided, it would seem better to operate in the forearm instead of the hand, and to split the tendons longitudinally, and after having gained such additional length as was needed by sliding the ends past each other, to suture them together once more.

In an aggravated case of congenital club-hand and club-foot of the right side, associated with lateral curvature of the spine, the author operated in the following manner: The club-hand was very marked. The radius and thumb were absent, as also the first metacarpal bone and a certain number of the carpal bones. The ulna was curved in its middle at an angle of about 30° towards the side where the radius should have been. The hand was almost at right angles with the forearm, bent towards the radial side and flexed on the forearm. The carpus did not articulate with the ulna, but was attached to it by means of firm ligamentous bands. An osteotomy was first done on the ulna to correct the curve, and after the bone had united in a straight line, endeavors were made to stretch the contracted soft parts on the side of the arm where the radius should have existed. After several weeks of traction, the hand could not be drawn far enough down to permit the ulna to slide above the carpus. Through an open incision, the ligaments between the ulna and the carpus were divided, the inten-

tion being to form an artificial joint between the lower end of the ulna and carpus. It was found impossible, however, to draw the carpus clear of the ulna, and therefore the styloid process of the ulna was cut off, the os magnum and uniform removed, and the end of the ulna put into the gap in the carpus thus formed. The bones were not wired in this position, with the idea that the hand might be more useful if this were not done, and it being, of course, feasible to wire the bones later on, if it should be deemed necessary. The shortening of the extremity, caused by the removal of this amount of bone, seemed preferable to the author, to the very extensive division of tendons and muscles which would have been necessary to permit the carpus to be pulled down. The hand is now approximately in line with the forearm. There is free motion at the wrist, and the ability to grasp objects is greater than it was before the operation, although extension of the hand on the wrist is poor, absence of the radius making a very imperfect joint.

In cases like that described by Bouvier, which is in the Dupuytren Museum, where such carpus as is present articulates with the ulna, on the side where the radius should have been—the radius being absent—the proper operation would seem to be the division of the ulna just above the articulation with the carpus, and then to turn it at right angles, letting the outer surface reunite with the end of the ulna, and thus bring the hand into a straight line with the arm, at the same time preserving the wrist-joint.

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Treatment of Colds.

An admirable remedy is the following :

R_x.—Salol.

Antikamnia.

Sulph. Quinia.

Terpin. Hydrate.....ãã grs. xxiv (24)

M. ft. Capsules xii. One every four hours.

This seems to be a large quantity, but if put in 10-gr. capsule, it can be taken readily, and is usually very well borne by the digestive organs.

Clinical Reports.

An Atypical Case of Cerebral Meningitis—Long Suspension of Normal Respiration while Heart Continued Normally.

By R. K. SMITH, M. D., of Pratt City, Ala.

Joel W——, white, age 24; admitted *May 29th*, 1893, 6 P. M. Pulse, 108; temp., 103° F. Had chill this morning; pain in head, back and extremities; some cough; dysphagia; bowels costive. P. S., negative. Pharyngitis. Prescribed calomel, grs. x; soda, grs. xx; make two powders. S: One every three hours. Also, quinine, grs. xx; Dover's powder, grs. xv; make three powders. S: One every three hours, commencing at midnight. 10 P. M.—Pulse, 96; temp., 102 $\frac{2}{3}$ °.

May 30th, 6 A. M.—Pulse, 84; temp., 98°; has had one action from bowels. 2 P. M.—Pulse, 96; temp., 101°. 5 P. M.—Pulse, 96; temp., 102 $\frac{2}{3}$ °; has had three actions. Ordered to repeat quinine to-night.

May 31st, 6 A. M.—Pulse, 96; temp., 101 $\frac{2}{3}$ °; no bowel action. 5 P. M.—Pulse, 96; temp., 101; no action.

June 1st, 6 A. M.—Pulse, 96; temp., 98 $\frac{2}{3}$ °; no action. Complains of pain in head. Acetanilid, grs. v, every three hours till pain is relieved. Walked about the ward after 12 o'clock. Unconscious at 1:30 P. M. At 2:20 P. M., he was absolutely unconscious, and all reflexes entirely lost. Pupils widely dilated. Respiration stertorous, and 5 to 8 times per minute. Pulse, 108; temp., 105°. Face flushed. Respiration stopped at 2:30 P. M. Pulse full and strong. Artificial respiration was resorted to; whiskey and atropine given, and head lowered. 3:40 P. M.—Pulse good. Artificial respiration continued, as also whiskey and atropine. 5 P. M.—Pulse good; capillary circulation good, but no attempt at respiration. Atropine continued. 8 P. M.—Pulse, 84; temp., 98 $\frac{2}{3}$ °. Thirty ounces of urine drawn from bladder; specific gravity, 1015; reaction acid; color, amber; test shows some albumen, about $\frac{1}{4}$ of 1 per cent. Hands and feet getting cold. Hot bottles applied to extremities and body.

June 2nd, 12 midnight.—Pulse, 84, and weak. 1 A. M.—Pulse scarcely perceptible at wrist. 3 A. M.—Pulse very weak; eyes sunken; pupils still dilated. 3 P. M.—Pulse,

76; temp., 98°. Condition unchanged. Trinitrin, grs. $\frac{1}{100}$, was administered hypodermatically.

June 3rd, 1 A. M.—Pulse imperceptible at wrist; heart sounds weak. Treatment continued. The whiskey, atropine, and trinitrin were given hypodermatically at regular intervals until heart ceased to beat. Artificial respiration was continued until heart sounds could be no longer heard, which was at 5 A. M., June 3rd, 1893, or thirty-eight hours and thirty minutes after respiration ceased; or about 46,200 times that he had the breath of life forced into his lungs without his assistance, knowledge, or consent.

Post-Mortem.—Seven hours after death. Rigor mortis beginning.

Head.—Dura mater, negative. Pia mater, blood-vessels distended with blood. There was an exudate of lymph and serum covering the convolutions and filling the sulci, which was yellowish-white in color, more abundant in the fissure of Sylvius and at base of brain. The ventricles contained about two ounces of sero-pus. The entire brain was softened and congested throughout. The inferior cerebellar lying over the fourth ventricle contained clots. There was no extravasation of blood to account for the sudden cessation of respiration.

The special features of interest in this case are: First. The mild symptoms—*i. e.*, the noticeable absence of pain until the day that he became unconscious; photophobia, delirium, muscular contractions, etc., etc.

Second. The sudden loss of consciousness and the high elevation of temperature at the same time; and then the rapid fall of the temperature.

Third. The cessation of the respiratory act while the cardiac functions remained unimpaired for quite a while.

Fourth. The length of time his heart continued to beat after the normal respiratory act had ceased, which was thirty-eight hours and thirty minutes, during which time artificial respiration was performed. If the respiratory act was withheld, the surface would gradually get darker in color; the heart faster and weaker.

Fifth. The suspension of action of all the reflex centres, both cerebral and spinal, with the exception of the vasomotor, cardio-inhibitory(?), vesical, and rectal.

Sixth. What started out as a demonstration to a young medical student, then an experiment, and then as duty bound, lasting for the length of time it did, makes this a case that is unique, and one from which the physiologist may be enabled to draw some conclusions that may be of some value.

Correspondence.

Medical Examining Board of Virginia.

Mr. Editor,—The history and work of the Medical Examining Board of Virginia demands more than a passing notice. The necessity for enacting judicious laws to regulate the practice of medicine and surgery has been recognized by all civilized nations from the dawn of civilization; at no period of the world's history has it been more important than the present. The steady progress in the sciences, the disposition to take short cuts to notoriety and gain, the frailties of human nature in this age of faith-cures, charlatanry and diploma traffic, demand our earnest attention in devising the best means of protecting the health and lives of the public and in promoting the standing and usefulness of our noble profession. It is a matter of profound interest to every citizen and class. At one time, it was thought only necessary to raise the standard of graduation in the medical colleges in the United States to give the protection demanded. The sharp competition and the rapid multiplication of medical schools of the country (Dr. Jno. H. Roach's Report, Illinois State Board of Health, 1891, states that there were 148 organized medical schools in the United States and Canada; this number has, however, been reduced to 137), seemed but to increase the difficulty. Many of them becoming mere diploma mills, degraded the name of Doctor, and jeopardized the lives of their too credulous fellow-citizens.

The representative medical men throughout the country,

the friends of higher medical education, seeing the danger, cast about for a way of escape from the growing evil, and giving relief to the public and the profession from this deadly Eupas, decided that the best means to obtain the end in view was through judicious and efficient medical legislation.

The Old Dominion, I am proud to say, was in the forefront of this grand reformation. In 1875 and 1876, the Medical Society of Virginia inaugurated a movement looking to the passage of an act by the State Legislature to establish a State Board of Examiners. In fact, a bill was prepared and presented to the legislative committees, and was favorably reported, but it was not thought judicious to press it at that time (1875-76), and no vote was taken upon it in either House.

At a subsequent meeting of the Medical Society of Virginia, 1881, a committee (of five) was appointed by the then President, the lamented Semple, to frame a law regulating the practice of medicine in this State, and procure its passage by the legislative committee (see Report of Committee of Med. Soc. of Va., 14th Annual Session, 1884). This law has governed the action of the Board of Medical Examiners of Virginia for eight years. With the able committee who framed the law, many of us have known its defects. The presiding officer at the time the law was adopted by the Society, 1884, in his address, recommended the appointment of a committee of revision of the committee's report. Some thought it was better to endure the ills we had than fly to those we knew not of, and no action was taken.

Allow me very briefly to sum up the work of the Medical Examining Board of Virginia and its benefits to the public. This Board—*i. e., the faithful ones*—as you well know, do not repose on beds of ease. The Board has had to contend with difficulties not known to the profession at large, or possibly not to the majority of the members of the Medical Society of which they are honored members. Sometimes they had to contend with adverse criticisms, and foes without and within, oblivious to the fact that this Examining Board is a

labor of love—a gratuitous work in the main, involving labor, expense, sacrifice of time and money, and a responsibility that, “like Banquo’s ghost,” will not down. They bear the heat and burden of the day, with the proud satisfaction of a duty discharged to their fellow-men. The fruits of their labor is made manifest in every community, where the germs of disease find a home, grow and multiply; their good work is seen and read of all men. But a short time since, a student of a distant medical college said to me, “One of my professors told me his college faculty had raised their standard of graduation, remarking, ‘We are tired of having our graduates rejected by the Medical Examining Board of Virginia.’”

Again, let me ask what has caused so many of the medical schools, especially North and West, to lengthen their course of medical study as a prerequisite to graduation of their students?

Is it too much to claim that the organization of the State Medical Examining Board, divorced from the teaching and graduating power in the different States, is an important factor in this reform? Our legislators are awaking to the importance of the reforms in medical education regulating the practice of medicine and surgery, and giving it their endorsement. The people hail their action as the harbinger of greater protection to their health and their lives, and exclaim, “Well done, good and faithful servants.”

Gentlemen of the Medical Society of Virginia, yours is a responsible obligation to your fellow-men; you truly are the guardians of their health, their lives, their happiness, and their fortunes; to you they look for protection. Shall they be disappointed? In a few months our legislative bodies will convene to revise and enact laws for the development of our State and the protection and prosperity of our citizens.

The law regulating the Medical Examining Board of Virginia has been in force over eight years. While much good has been accomplished in the elevation of the standard of the practice of medicine and surgery, and conse-

quently the better protection of our fellow-citizens, still we feel the law is not perfect, and requires some modification or changes to be made for the further protection of our people. Then let every member of the Medical Society of Virginia use his influence to bring about the much needed changes in the present law regulating the practice of medicine and surgery in the Old Dominion.

J. EDGAR CHANCELLOR, M. D.

Charlottesville, Va., Sept. 6th, 1893.

Proceedings of Societies, Boards, etc.

MEDICAL EXAMINING BOARD OF VIRGINIA.

Under the new plan, the Chairmen of the different Sections forwarded the Questions for their respective Sections to the Local Committee of the Board, namely: Drs. Hugh M. Taylor, Benj. Harrison, Paulus A. Irving, and Jacob Michaux. These members proceeded with the *Second Semi-Annual Meeting of the Ninth Annual Session* in the Hall of the House of Delegates, Capitol Building, September 20th, 21st, and 22d, 1893. In addition to the above, Dr. Herbert M. Nash, of Norfolk, was in attendance one day. The number of Applicants for Examination for License to practice in Virginia was 36. The papers handed in were taken in charge by the Local Committee of the Board for examination. The full Board will meet in Charlottesville, Va., October 4th, to report the results of their examinations and to issue licenses in due form. Our November number will contain the usual formal report of that meeting, including the List of those to whom Licenses are to be granted, etc. Dr. Hugh M. Taylor, of Richmond, is President of the Board; Dr. Benj. Harrison, Richmond, Va., Secretary.

The following are the Questions that were adopted for the Examinations September 20th, 21st, and 22nd—the hours being the limit allowed for each Section—three subjects being up for Examinations on the 20th and 21st, and two on the 22d:

I.—SECTION ON CHEMISTRY.

Members.:—Drs. P. B. Green, Wytheville, *Chairman*; A. C. Palmer, Norfolk; Benj. Harrison, Richmond; T. O. Jones, Harrisonburg.

Ques. 1. Define specific gravity. State how the specific gravity of a liquid is determined; also that of a solid.

Ques. 2. What is chemical affinity? Give an example of the results of its action, and state how this force differs from adhesion.

Ques. 3. Give a complete history of antimony, its compounds, use in medicine, and method of detection.

Ques. 4. Give the sources from which the alkaloid strychnia is obtained; state how prepared, its physical and chemical properties, with tests for its detection.

Ques. 5. Give the ingredients of normal urine; the tests for sugar, urates and earthy phosphates in urine.

Ques. 6. Define organic acids; name some of the most important used in medicine; state their formation generally.

II.—SECTION ON ANATOMY.

Members.:—Drs. H. M. Taylor, Richmond, *Chairman*; Paulus A. Irving, Richmond; R. D. Huffard, Kelly, Tazewell Co.; Jos. T. Southall, Jetersville.

Ques. 1. Describe the first and second ribs, and the bony structure of the acetabulum.

Ques. 2. Give origin, exit, branches, function, and distribution of the trifacial nerve.

Ques. 3. Describe the visceral and parietal pelvic peritoneum in the male and female.

Ques. 4. Describe the maxillary group of muscles.

Ques. 5. Give origin, relations, branches, and landmarks, in locating the femoral artery.

Ques. 6. Describe the membranous and prostatic portions of the urethra and base of the male bladder.

III.—SECTION ON HYGIENE AND MEDICAL JURISPRUDENCE.

Members.:—Drs. O. B. Finney, Onancock, *Chairman*; J. W. Tankard, Burgess' Store; T. W. Simmons, Martinsville; J. E. Chancellor, Charlottesville.

I.—*Hygiene.*

Ques. 1. In an outbreak of cholera or yellow fever in a

city, what steps should be taken by the authorities in regard to the patient and protection of the public?

Ques. 2. State the difference between infection and contagion, and name some of the diseases of each class.

Ques. 3. Name the impurities sometimes found in drinking water; the diseases caused by them, and best method of purification. Classify the sources of water as regards quality and wholesomeness.

II.—*Medical Jurisprudence.*

Ques. 1. State, with illustration, the different modes in which suffocation may be produced.

Ques. 2. State the modes of sudden death; the symptoms and causes peculiar to each; and the post-mortem appearances.

Ques. 3. What is rape as defined by the law? Give signs and other evidences that it has been perpetrated.

IV.—SECTION ON PHYSIOLOGY.

Members:—Dr. Robt. Glasgow, Lexington, *Chairman*; Drs. R. F. Young, St. Clair's Bottom; R. S. Martin, Stuart, Patrick Co.; W. L. Broaddus, Bowling Green.

Ques. 1. What is osmosis? Give an illustration.

Ques. 2. How many heart-sounds are there, and to what are they due?

Ques. 3. Describe the nerve-supply and movements of the vocal cords?

Ques. 4. Give composition and function of bile?

Ques. 5. Describe the movements of respiration, and state the changes the blood undergoes in passing through the lungs.

Ques. 6. Give general description of spinal cord, arrangement of gray and white substance in same, and describe the connection of the spinal nerve-roots with the cord.

V.—SECTION ON MATERIA MEDICA AND THERAPEUTICS.

Members:—Dr. C. C. Conway, Rapidan, *Chairman*; Drs. A. Trent Clarke, South Boston; S. W. Budd, Petersburg; Jas. Parrish, Portsmouth; M. A. Douglass (Homœop.), Danville; — Young (Homœop.), Lynchburg.

Ques. 1. Define cardiac stimulants, cardiac tonics, and cardiac sedatives, giving examples of each class.

Ques. 2. Explain the difference in the action of styptics and hæmostatics, giving examples of each class.

Ques. 3. Explain the difference between antidotes and antagonists, giving examples of each.

Ques. 4. Name the most efficient intestinal antiseptics, their doses, and the indications for their use.

Ques. 5. What are gastric sedatives, and what are stomachics? Mention some of the principal ones of each class.

Ques. 6. Give the physiological action and therapy of the salts of manganese.

Ques. 7. Give the nativity, physiological action, and therapy of guaiacum guarana and picROTOXINE.

Ques. 8. Give the dose of chloride of gold and sodium, oxalate of cerium caffeine, citrate and muriate, pilocarpine, apomorphia.

VI.—SECTION ON OBSTETRICS AND GYNÆCOLOGY.

Members:—Dr. H. M. Nash, Norfolk, *Chairman*; Drs. B. L. Winston, Hanover C. H.; G. D. Meriwether, Buena Vista; H. M. Patterson, Staunton; George A. Tabor (Homœop.), Richmond.

Ques. 1. What are the signs of pregnancy?

Ques. 2. Describe the mechanism of labor with the head in the right occipito-anterior position.

Ques. 3. What precautions are necessary to prevent sepsis before, during, and after labor.

Ques. 4. Give the treatment of post-partum hæmorrhage.

Ques. 5. Name the indications for the use of the forceps, version, craniotomy, and Cæsarean section.

Ques. 6. Give the symptoms and signs of pyosalpinx.

VII.—SECTION ON PRACTICE OF MEDICINE.

Members:—Dr. R. W. Martin, Chatham, *Chairman*; Drs. Bedford Brown, Alexandria; R. I. Hicks, Warrenton; T. J. Taylor, Walthall's Store; W. P. Jones (Homœop.), Petersburg.

Ques. 1. State the causes of constipation, and explain how each cause acts. Give the morbid anatomy of constipation.

Ques. 2. State the causes and symptoms, including physical signs, of ascites.

Ques. 3. Give the situation, mode of formation and structure, color and thickness of the false membrane of diphtheria. Describe the diagnostic difference between diphtheria and croupous (follicular) tonsillitis.

Ques. 4. Name the initial symptoms of phthisis pulmonalis, and explain how each symptom is produced.

Ques. 5. Describe the different changes in the skeleton, muscles and skin of a rachitic child.

Ques. 6. State the causes of death in cerebro-spinal meningitis, and explain the mode of action of each cause.

Ques. 7. State the causes, symptoms and diagnosis of herpes zoster.

Ques. 8. Give the indications of treatment, and the means of fulfilling the indications of scarlet fever and of infantile eczema.

VIII.—SECTION ON SURGERY.

Members:—Drs. J. W. Dillard, Lynchburg, *Chairman*;
J. Michaux, Richmond; Leigh Buckner, Roanoke;
W. P. McGuire, Winchester, Va.

Ques. 1. Describe the several modes of termination of inflammation.

Ques. 2. Describe the causes of the various forms of surgical fever.

Ques. 3. Give the symptoms, pathology and treatment of shock and mode of death from it.

Ques. 4. Give symptoms, pathology and treatment of tuberculosis of the knee-joint.

Ques. 5. Give symptoms and treatment of fistula in ano.

Ques. 6. Define hydrocele and give diagnosis of the same.

FIRST PAN-AMERICAN MEDICAL CONGRESS.

Washington, D. C., September 5, 6, 7, 1893.

First Day.—Dr. Wm. Pepper, of Philadelphia, Pa., President, in chair, Dr. Chas. A. L. Reed, of Cincinnati, Ohio, Secretary General, on the stand. After prayer, the Address of Welcome was delivered by President Cleveland in his usual clear, distinct style. Then followed some formal speeches from representative doctors of other American countries.

[NOTE BY EDITOR.—Want of space compels us to dismiss attempt at either a systematic or a full report of the proceedings, etc. We have to content ourselves simply with some selections of reports from the several Sections. The volume of *Transactions* will cover some thousands of pages, if the Publishing Committee decides to put in the volumes all of the papers and the stenographic reports of discussion.]

Prof. Francisca A. Risquez, of Caracas, Venezuela, read his Address on *The Medical Flora in its Relation to Medicine*. The Americas, he said, are richer than any other section of the world in their medicinal flora. It seemed that a special providence had ordered the growth of the cinchona bark in the region of South America, where it was needed to combat the effects of the fevers of the swamp country. Mexico was particularly rich in balsams, bitters, and healing drugs. It was the duty of the American profession to continue the work of original research to fully develop the wonderful medical resources of the Western Hemisphere.

Dr. Risquez also read a paper on

Forms of Malaria in Venezuela.

After speaking of the four forms of malarial diseases, namely—(1) Intermittent. (2) Continued, (3) Pernicious, and (4) Larved, he remarked that an early diagnosis is indispensable in these cases, because they require the fearless administration of quinine; and this drug may be contra-indicated in the non-paludal diseases. There is but one unquestionable method of diagnosis: *the microscopic examination of the blood*. All malarial manifestations are accompanied with melanæmia; melanæmia presents itself exclusively in malaria—the sign is, therefore, pathognomonic. A drop of malarial blood, under the microscope, shows the masses of black pigment in the plasma. The manipulation requires no special technique; it is simpler than the examination of the urine. Our method requires only a few slides and covers, and a drop of blood obtained from the finger, previously washed. The preparation is taken to the laboratory and there examined. The strong mineral acids may be used as reagents. A search after pigment should be made in all suspected cases. The number and size of the pigment masses is proportional with the degree of malarial poisoning. If they are found at all, quinine should be given. He has found pigment in all forms of malaria, and also in other diseases, but only as an evidence of malarial complication. Melanæmia is always an indication for the administration of quinine. The life of the patient depends often in these cases upon a prompt diagnosis.

Atypical Cases of Typhoid Fever.

Dr. Wm. C. Dabney, Professor of Practice of Medicine, University of Virginia, based his paper on a study of fourteen cases of continued fever occurring at the University of

Virginia between January 15 and April 1, 1893. The outbreak presented the following features of interest: (1) There had been no typhoid fever in or around the University, so far as he could learn, for several months. (2) Between the middle of January and the first of April, 1893, there occurred fourteen cases of continued fever among persons living or employed on the University grounds. (3) The persons who had this continued fever had rooms at widely separated parts of the University grounds, but all took their meals at the same hotel. (4) The water supply of this hotel was the same as that of the other hotels and of other parts of the University, and the sanitary condition of the building was good. (5) A part of the milk supply was obtained from cows whose teats had been washed in water contaminated by sewerage and *probably* infected with typhoid fever germs. It was in evidence also that at least five of the fourteen persons used milk at every meal. (6) Of the fourteen cases of continued fever, five presented the typical features of typhoid, seven were atypical in character, and of the other two he could not speak with certainty, as they were not under his care and he could get no satisfactory history of the cases. Ten of the fourteen cases were under his immediate care.

Treatment of Scarlet Fever by Chloral Hydrate.

In his paper before the Pan-American Medical Congress, Dr. James C. Wilson, of Philadelphia, stated that the general drift of opinion is at present in the direction of an expectant—symptomatic plan. Under this plan of treatment, almost all recent authorities refer to the use of chloral hydrate for the control of the nervous symptoms. Over this group of symptoms—partly the result of the infectious toxæmia, partly the result of the tegumentary efflorescence—chloral unquestionably exercises a powerful influence.

Given thus continuously throughout the attack, in appropriate doses, it is also to a high degree diuretic. It destroys low organisms and inhibits the decomposition to which they give rise. It is, therefore, to some extent, an antiseptic. Chloral as such is excreted in the urine so long as the urine remains acid. It tends to diminish blood pressure and to lower temperature.

Theoretically, then, chloral fulfils in scarlet fever a larger number of causal and symptomatic indications than any other single drug. Practically, the writer has found the treatment of scarlet fever by chloral to yield more satisfac-

tory results in the course of individual cases and in the reduction of the mortality, than any treatment previously used. He has now employed chloral in accordance with the following plan in the management of all cases of scarlet fever for a period covering epidemics and cases of every grade of intensity, and extending over ten years, with the most satisfactory results as compared with any other method of treatment known to him :

So soon as the patient is suspected or known to be developing scarlatina, a laxative dose of calomel, proportionate to the age and general condition, is administered. Shortly thereafter chloral is given, in moderate doses, at intervals of two or three hours, or longer, throughout the attack. The dose varies with the age of the child ; the frequency of its administration depends largely upon its effect. To infants of two or three years, a dose of from one to two grains may be given, the dosage being gradually increased with older children ; that for adolescents reaching five grains. The tranquilizing and sleep-producing effects of the drug are in most instances promptly realized, the patient falling into a condition of quietude or somnolence, in striking contrast to the discomfort and jactitation which are so distressing in the well-developed disease.

The repetition of the dose should not be more frequent than is necessary to maintain this condition of quietude, a condition from which the patient may be easily aroused, and into which he quickly relapses when disturbed. It is neither necessary nor desirable to push the drug to the establishment of a deeper sleep. Profound narcotism is, of course, to be avoided. The patient may thus be kept in a condition of light repose throughout the whole duration of the fever. By this means, not only is there obtained relief from the restlessness and distress of the active period of the disease, but much wear and tear of the nervous system and some exhaustion from muscular effort are prevented. Delirium is controlled ; the itching and burning of the skin due to the eruption are allayed ; in a word, the greater number of the distressing symptoms of the disease are favorably influenced by the cautious and prolonged administration of chloral hydrate in efficient doses.

As a rule, the drug is easy of administration and well borne by the stomach. I have found its acrid after-taste best masked by the administration in Aubergier's syrup of lactucarium diluted, thus :

R.—Chloralis hydrat.....gr. xxx
 Syrup. lactucarii (Aubergier...
 Aquaāā ʒ jss

M. S.—A teaspoonful in iced water every two, three or four hours.

The administration of nourishment immediately after the medicine is desirable. The sleep-producing properties of the drug manifest themselves rapidly, but are not prolonged; therefore, its repetition at intervals of two or three hours is called for.

Systematic inunctions of goose-grease or washed lard are practiced at intervals of four or six hours throughout the attack. The throat and nasal passages are sprayed with some antiseptic detergent fluid at regular intervals, varying according to the degree of disturbance of the naso-pharyngeal mucous membrane.

In the way of medicines chloral only is employed. As a stimulant, alcohol is given rather freely in the form of milk punch, wine whey, champagne, etc. Except in response to special incubations, no other drugs are administered until the defervescence is complete. After this period small doses of quinine and iron in some appropriate form are employed.

The Dorsal Decubitus After Confinements and Miscarriages is the Commonest Cause of Retroversion with Fixation.

The conclusions of a paper by A. Lapthorne Smith, M. D., of Montreal, Can., prepared for the Pan-American Medical Congress were as follows:

1. After confinement or miscarriage the uterus is unusually heavy, and is therefore especially subject to the law of gravitation.

2. During the process of enlargement during pregnancy the ligaments, especially the round ones, become lengthened and probably weakened, because they are not used, the uterus being held in position by other means by that time.

3. By allowing the patient to remain on her back for ten days after delivery or miscarriage, the heavy and unsupported fundus gravitates onto the spine, and as it involutes it gradually sinks into the hollow of the sacrum, where it receives the intra-abdominal pressure on its anterior surface, and where it obstructs the passage of the rectum like a valve; the more the patient strains the tighter it closes the canal.

4. The uterus is then in the position of a bottle with the

mouth up, and the lochial discharge accumulates in it; if germs have been introduced, the conditions for fermentation are very favorable. The bottle, however, has two holes in it, through which the fermenting liquid leaks into the cavity of the pelvic peritoneum, setting up an attack of local peritonitis. If the patient recovers from this, as she usually does, the ovaries, tubes, and fundus uteri will be found firmly glued together in Douglas' cul-de-sac, from which no manipulation short of abdominal section will generally remove them.

5. Such a condition of the uterus and appendages generally renders the woman a life-long sufferer.

6. This condition is absolutely preventable by keeping the patient on her face or partly on her side after miscarriage and confinement, and by allowing her to sit up on a chamber, leaning forward when possible, when evacuating the bladder and bowels.

The dorsal decubitus, while having this great objection, has nothing to recommend it. There is no foundation for the dread that hæmorrhage will come on if the patient turns on her side or face.

Advantages of Amorphous Phosphorus over the Official Form.

In the paper by Dr. E. Q. Thornton, Demonstrator of Therapeutics, Jefferson Medical College, Philadelphia, Pa., prepared for the Section on Therapeutics, he remarks that the investigations of Wegner, Bradley, Broadbent, Thompson and others should leave little doubt as to the value of phosphorus as a stimulant to bone-growth, and in the treatment of disorders, due to exhaustion or wasting of the nervous tissues. The remedy, while undoubtedly possessing powers so potent for good, has the great disadvantage of not being entirely safe, as disorders of digestion, nephritis, and fatty degeneration are not infrequently attributed to its administration. On account of these untoward effects, many authors have wisely insisted upon the utmost precaution in its use. As is well known, the form of phosphorus exclusively employed in medicine is the vitreous variety, from which both of the official preparations are made. Both of these preparations are open to the objections named above, and on account of the readiness of phosphorus to undergo change when exposed to the air, the pills are necessarily made by a complicated process which renders their extemporaneous manufacture difficult. As to phosphorated oil, the other official preparation, its taste is extremely nause-

ous, as may be inferred from its combination (phosphorus, ether and oil). It is on account of these disadvantages of the vitreous phosphorus I am led to suggest the employment of the amorphous or red variety. The amorphous phosphorus is made by heating the vitreous variety to 250° C. in the absence of air, and possesses the following advantages over the official variety: It does not readily undergo change at ordinary temperature, is almost entirely without taste or odor; therefore it can readily be made into pills at a moment's notice; it is free from irritant or caustic effect; consequently, it is far less liable to give rise to irritation or inflammation of the gastro-intestinal and genito-urinary tract; but its greatest advantage lies in the fact that it is non-toxic, and therefore far safer.

That it has the same physiological effect as ordinary phosphorus seems to be proven beyond doubt by Kelly, who, while experimenting upon himself to determine if it was toxic, experienced the full physiological effects of vitreous phosphorus. The following brief extracts are made from Kelly's essay, which has never been published:

Experiment No. 1.—For the first three days one-tenth grain amorphous phosphorus was taken every two hours, nine doses being taken each day. On the fourth day, each dose was increased to two tenths grains, and from the tenth until the twenty-fifth day three-tenth grain every two hours, nine doses a day being taken. Effect:—Mental excitement, headache, vertigo, priapism, nocturnal emissions of semen, followed, about the twentieth day, by nervous exhaustion. Return to his normal, healthy condition in about two weeks after discontinuing the drug.

Experiment No. 2.—About two weeks later, he began taking amorphous phosphorus in doses of one-hundredth grain, increased on the fifth day to two one-hundredth, and on the tenth day to four one-hundredth grain, nine doses being taken each day. Priapism and nocturnal seminal emissions were among the most pronounced effects. The drug was discontinued on the seventeenth day, and he soon returned to his normal condition.

Experiment No. 3.—About six weeks later, he took, at a single dose, twenty grains of amorphous phosphorus. The physiological effects came on promptly. Priapism, vertigo, nausea, followed by muscular tremors, cold, clammy skin, great exhaustion, and seminal emissions while asleep, were the most pronounced effects. For some weeks he was in a state of nervous exhaustion, from which he gradually re-

turned to his normal condition. He is now in good health, and shows no ill effects of this rather vigorous medication.

Reese publishes a case in which thirty grains of amorphous phosphorus was taken by a young woman with suicidal intent, no toxic symptoms having been manifested. My own experiments upon animals are in accord with those who assert that the substance in large quantities is non-toxic. My investigations as to the effect of long continued doses is as yet incomplete.

These records would seem to indicate that amorphous phosphorus, while having the same physiological action of the vitreous variety, is to be preferred, as it is much easier to administer, less irritating, and, above all, is a far safer remedy.

The Use of Nitro-Glycerine in Arterio-Sclerosis.

In the Section on Therapeutics, Dr. Thomas G. Ashton, of Philadelphia, Pa., Demonstrator of Clinical Medicine in Jefferson Medical College, presented a paper on this subject. To appreciate the reasons advanced for the use of nitro-glycerine in arterio-sclerosis, it is necessary to have a clear understanding of the lesion of the disease and its mode of progress. Thoma places the origin of the lesion in the media, which, from some unknown cause, has lost its elasticity. Resulting from this loss of elasticity, the artery dilates and the blood stream flows more slowly than normal. This produces a hyperæmia of the vasa vasorum and a new growth of connective tissue in the intima—the media and adventitia subsequently sharing in the morbid process. So soon as this new growth, in any situation, reaches such dimensions that the normal rapidity of the blood stream is re established, these changes cease.

From these observations, Thoma deduces the following law: A slowing of the blood-current in an artery that is not at once and completely counteracted by a proportionate contraction of the media, leads to a new growth of connective tissue in the intima which lessens the lumen of the affected vessel, and thus restores the normal swiftness of the blood-current more or less completely.

These changes in the blood-vessel cause a thickening of its wall with narrowing both of its lumen and its opening at its point of departure from the main vessel. Consequently, the various organs and tissues, including the arteries themselves, receive an amount of blood insufficient for their nutrition.

Upon this fact is based the usefulness of nitro-glycerine in arterio-sclerosis. This drug, acting upon either of the muscular walls of the arterioles, or upon the vaso-motor ganglia in or near them, causes a dilatation of the arterioles (Brunton). Thus do we have not only a lessening of the arterial tension, which is such a constant accompaniment of arterio-sclerosis, but the tissues generally are made to receive a large quantity of arterial blood; this increases their nutrition and tends to prevent the secondary degenerations dependent upon the lessening of the blood supply to the tissues which is characteristic of the disease. Therefore, such cerebral symptoms as vertigo, headache, or impairment of memory, which result from insufficient blood-supply to the brain, disappear under the use of nitro-glycerine. By lessening arterial tension and by removing the inhibition of the vagus from the heart (Bartholow), the hypertrophy of that organ is modified. So also by its action upon the vessels renal changes are often arrested and these organs brought back to a fair condition of health.

As there is a wide difference in individual susceptibility to the action of nitro-glycerine, it is well to begin with one one-hundredth of a grain, gradually increasing this until the physiological effects are produced and maintained.

The effects of the drug are transient, being observed for less than half an hour upon the sphygmogram, and the interval between the doses, therefore, should not be more than two or three hours.

Nitro-glycerine tends to arrest the oxygen-carrying function of the red blood-corpuscle, and it is therefore important not to give it in doses larger than necessary to produce the desired effects; and during long-continued courses of the drug to interpose frequent periods of abstinence from its use.

Arterio-sclerosis is a progressive disease, and it is not claimed, therefore, that nitro-glycerine will effect a cure. It is claimed for the drug, however, that it will retard the progress of the affection and alleviate many of its most distressing and serious manifestations.

Hypnotism:—Does it Menace Public Weal?

Dr. Ferd. C. Valentine, of New York City, in his paper on this subject, remarked that all hypnotizers acknowledge that first attempts at introducing the hypnotic state are either futile or produce only slight drowsiness. It is necessary, with people of the average mental balance, to repeat and repeat the experiments, until the "subject has been trained"

to yield all volition. This never is accomplished before, at the very least, three interviews, at each one of which the "subject" must not oppose her or his mentality to that of the hypnotizer.

It is beyond dispute that under what for convenience's sake is herein called the hypnotic state, people may be induced to do absurd things. But would the absurdities, such as poor and silly imitations of circus riders, ballet dancers, and even indecent acts, be committed if not rewarded by the plaudits or wonder of unthinking lookers-on? The other motive, that of a pure financial character, should not be left out of consideration. But, in all cases, it is safe to deny that any "subject," no matter how well trained, would be caused to commit, while in the hypnotic state, any deed which the laws castigate.

Dr. Valentine then cited numerous remarkable exhibitions of hypnotism, and cases where it had been sought to show that it had been the cause of criminal acts. In conclusion, he said:

It is by no means intended to convey the idea that all hypnotizers and their subjects are frauds. This would be a sad and unjust reflection upon honest scientists who work earnestly for the benefit of suffering humanity. Mild lunatics are perhaps controlled by the hypnotic influence; hysterical patients are cured by it of their imaginary ills; some drunkards may have acquired an aversion to liquor through it. If these results circumscribe the powers of hypnotism, its benefits are incalculable. Doubtless its powers, as its limitations, will be eventually better defined. But the efforts recently made to introduce hypnotism as a factor in the exculpation from punishment for crime, is a danger, not only to the community as such, but also to the advance of hypnotic study. While hypnotism is yet young, it is naturally a field for unscrupulous farsants, or worse; but that they are mountebanks, will remain difficult to prove, as long as willing subjects can be found. And while people are mercenary or covetous of applause, or desirous of provoking wonder, so long will subjects seek the showman and disport themselves—decently or otherwise, as is their bent. It is beyond doubt that a majority of these "subjects" believe themselves entitled to the wonder, admiration, or disgust of the gaping crowds, at so many cents or shillings per head.

The therapeutic possibilities of hypnotism are not denied. A patient who persuades himself, or is persuaded, that he can be cured by the hypnotic influence, is as well or better

cured than by drugs or appliances that do not appeal to his view of the case.

The hypnotic state should never be allowed a status in law or morals. While it is certainly better that a hundred rogues escape than that an innocent being be punished, there is no human mind conceivable that can be induced by hypnotic suggestion to do what its owner knows to be wrong. Those "moral defectives" who cannot distinguish right from wrong are proper subjects for the insane asylum.

It must be clearly understood that no one can be hypnotized without his own fullest consent and co-operation; consequently any law of the land or even unwritten code of morals, violated while under the alleged "influence," is as punishable as if committed in full, independent possession of the mental faculties.

Should Inebriates be Punished by Death for Crimes Committed while Intoxicated?

Dr. T. D. Crothers, Superintendent of Walnut Lodge Hospital, Hartford, Conn., in his paper on this subject, said that a negative answer to this question is an evolutionary growth coming into prominence, uninfluenced by legal rulings or personal opinions. The modern scientific view of this question affirms inebriety to be a physical condition of disease, inherited or acquired, and at all times a modified form of insanity. The use of alcohol is, in many cases, only a symptom of degeneration, and in all cases it produces not only changes in structure and circulation in the brain, but kindles into activity latent degenerate tendencies, of which the result is an incapacity to reason, with imperfect control of the damaged senses. The inebriate cannot be a normal sane man.

In England a century ago, when public executions for thieving were common, thieves and pickpockets committed the same crimes in crowds about the foot of the gallows. To-day the execution of an inebriated murderer, where all the details of the crime are made public, becomes an object lesson closely followed by other inebriates, who commit similar crimes under precisely similar circumstances. The natural history of such cases is continuous punishment for inebriety, assault, theft, burglary, petty crime, and, finally, murder. Each period of punishment is followed by the same or a more aggravated crime. The purpose of the law is defeated, and this means for the treatment of crime, both directly and indirectly, increases crime and prepares the inebriate for worse and more hopeless states.

From the facts above stated, the Doctor said, the following are some of the conclusions that may be drawn:

The legal treatment of insanity has changed in obedience to a more accurate knowledge of the brain and its diseases.

The legal treatment of inebriety is unchanged, and although to-day it occupies two-thirds of the time of the courts, all teachings of science and a larger knowledge of the inebriate and his malady are ignored.

The inebriate should never be hanged for crime committed while under the influence of alcohol.

This form of punishment is never deterrent, but furnishes an attraction for other inebriates to commit the same crimes under similar circumstances, following some law of mental contagion.

The inebriate murderer should be confined for the rest of his life in a military workhouse hospital. He should be under the care of others.

Inebriated criminals should never be tried in public, but should be made the subject of a private inquiry and be placed quietly in a workhouse hospital and buried away from all observation and knowledge of the world.

Insanity, Hysteria, etc , in the Negro—Insensitive to Narcotics.

In the paper by Dr. J. B. Da Lacerda, of Rio Janeiro, it is stated that a serious study of the neuro-pathology of the negro can only be undertaken in such countries as Brazil, the United States, and some of the Spanish colonies. In the negro race, the psychoses, and the diseases classified under the vague denomination of neuroses, are relatively rare. The most prevalent form of insanity is the *mania of persecutions*. It assumes the most varied forms, and is always accompanied with hypochondria and hallucinations. Suicide is not a rare termination of such cases.

The miserable social conditions of the slaves, the cruel treatment to which they were subjected, may perhaps explain the dominant features of the psychoses of the negro of Brazil. Notwithstanding what we read in the recent work of Gilles de la Tourette, he does not hesitate to say that hysteria is a rare neurosis in the negro race. He has never seen a negress with *hysteria major*, or with those ill-defined nervous troubles that are considered to-day as manifestations of hysteria. All opinions to the contrary are probably founded on simulated attacks. It is also worthy of note that the nervous system of the negro is less sensitive to the action of narcotics. It requires larger doses of opium and chloral to make him sleep.

Chronic Bright's Disease, other than Typical Fibroid Kidney, without Albuminuria.

Dr. D. D. Stewart, of Philadelphia, Clinical Lecturer on Medicine, Jefferson Medical College, remarked that the mere absence of albumin from the urine does not exclude renal degeneration. With the non-discovery of albumin in a renal suspect, a further inquiry as to abnormalities of the urine, microscopically and chemically, is too frequently abandoned. Even our best text-books on general medicine fail to either notice or lay stress upon the fact that Bright's disease may occur and run its course without albumin ever being discovered in the urine. Yet the occurrence of such cases was known to Wilks, of Guy's Hospital, in 1852; and Mahaned, in 1879 and 1880, described a number of them. These, however, were all cases of red, granular (fibroid) kidney, occurring in middle life or old age, and usually associated with such typical symptoms of this affection as marked cardio-vascular changes, and at some time or other in the course of the disease polyuria. The symptoms were those now known as common to arterio-capillary fibroid kidney, often rather cardiac than renal. None, so far as the speaker knows, have described such cases as certain of those whose history he relates. In all, albumin is totally absent from the urine, and a tendency to diminution rather than any increase in the normal amount of urine has always existed. Nitrogenous excretion is lessened, and casts (in all hyaline, in several granular, and in one also waxy) and kidney epithelia have been discovered in the urine. In several—young adults—cardio-vascular changes are absolutely undetectable, though arterial tension is high and the apical second sound accentuated. In others—in middle life—cardio-vascular changes are slightly present, but the apex beat is not displaced. In nearly all some uræmic symptoms have occurred, and have drawn attention to the kidney ailment. In several, eye-changes are present. The cases he reported present symptoms other than those of typical granular kidney, and the ease with which the number reported was collected, after the first of them observed was recognized, indicates that they are of probably common occurrence, though generally overlooked.

Antipyretic Action of Calomel.

Drs. R. J. Nunn and A. B. Simmons, of Savannah, Ga., in their paper prepared for the Section on Therapeutics, remark: From the use of calomel in twenty-five cases of ty-

phoid and continued fever cases we have drawn the following conclusions :

1. Calomel is a sure and safe antipyretic, reducing the temperature from two to three degrees in a few hours.

2. Small doses will prove of no avail.

3. The ingestion of large doses was followed by no untoward event, no pytalism, no hyper-catharsis. This is contrary to the usual opinion.

4. Diarrœa, hæmorrhage, albuminuria, tympanites have not been contra-indications to the use of the remedy.

5. The reduction of temperature occurs without cathartic action on the bowels.

6. The calomel acts best in combination with soda, bismuth and pepsin.

7. In some instances, the remedy appeared to cut short an attack, and in others, while having no influence on its duration, it modified all symptoms, and by keeping temperature in check, aided materially in the management of the case.

Ultimate Prognosis in Neglected Adenoid Hypertrophy.

The paper prepared for the Pan-American Medical Congress by Dr. D. Bryson Delavan, of New York city, starts with the question: "Does adenoid hypertrophy, if left to itself, disappear, leaving the pharyngeal vault in a normal, healthy condition?" Generally speaking, it does not, but remains under some pathological state, which may continue throughout the life of the patient.

1. The enlargement may not entirely subside, and a degree of hypertrophy sufficient to cause serious injury and annoyance may continue to exist for many years.

2. The so-called "Thornwaldt's Disease" appears to be nothing more than neglected adenoid hypertrophy.

3. Disappearance of the hypertrophy may be attended with an atrophic condition of the vault of the pharynx, the result of which is a pathological state, detrimental to the patient and difficult to cure.

The above conditions may influence not only the locality in which they arise, but may have far-reaching and disastrous effects upon other organs. The ultimate prognosis as to the local condition, therefore, in cases of neglected adenoid hypertrophy is unfavorable.

A Plea for the Early Diagnosis and Prompt Electrical Treatment of Fibroid Growths of the Uterus.

In the paper by Dr. G. Batton Massey, of Philadelphia, Pa., prepared for the Section on Gynæcology and Abdomi-

nal Surgery, the questions considered have reference to the nature and symptoms of the early manifestations of uterine fibrosis and myomatous new growths; the duties of the profession in making a prompt diagnosis and instituting early treatment for the condition, and a consideration of the value of the Apostoli methods in these cases, and presents the following conclusions:

1. The early signs of uterine fibrosis are quite similar to those of a number of more common disorders, and are consequently mistaken for them in many instances. Whenever metritis, displacements, or persistent sensations of pain and weight are found, the physician should bear in mind the possibility of the cause being an incipient fibroid development, and if found to be so, he should place the patient at once under treatment.

2. The most recent views of the etiology of fibrosis indicates that the mode of action of electricity is most likely by a stimulation of the trophic and sorberacient functions of the uterus, rather than by an electrolytic destruction of the growth.

3. The expectant policy in dealing with fibroids is too prevalent, resulting in many cases losing the decided advantage to be derived from early treatment.

4. The early diagnosis of fibroid growths has the advantage of placing all cases within the list of those that are amenable to electrical treatment, while delay permits of some becoming unsuitable for it.

5. All forms of fibrosis and fibroid neoplasms of the uterus are suitable for electrical treatment except those that have undergone cystic changes, or that are accompanied by purulent accumulations in the uterine adnexa.

MEDICAL SOCIETY OF MOBILE.

July 8th, 1893, President H. T. Inge, M. D., in chair.

Order of business being relation of cases.

Dr. Thomas had seen several cases of Continued Fever, none very severe, the fever lasting from one to four weeks; temperature ranging from 99° to 103° F. He had treated a patient with *retinitis albuminuria*. When first seen, she was nine months pregnant and presented marked symptoms of uræmia; during parturition these symptoms were aggravated, but were controlled by bromides and chloral. Ophthalmoscopic examination confirmed the diagnosis of retinitis.

Dr. Jackson reported a case of a negro boy at twelve years whom he examined at the office. *The heart presented a continuous bruit sound*, and no distinct first and second sounds could be indicated. The lymphatic glands were enlarged; the patient complained of severe nocturnal pains; the case was diagnosed as one of *congenital syphilis affecting the heart*. Under antisyphilitic treatment the patient somewhat improved, but finally got worse and died. Post mortem showed warty growths of a gummatous nature on all the valves of the heart, but more marked on the auriculo-ventricular valve; the muscle wall of the left ventricle was considerably inflamed and very fragile, producing a *carditis*, or *myocarditis*, which was the first of this kind of pathological change of the heart he had the opportunity to observe. Results of post mortem confirmed the diagnosis of syphilis of the heart.

Dr. Scales had seen an unusual case which had been sent to the City Hospital by the Mayor. The resident physician first noticed a glossy tumor in the left groin; this had burst when seen by the reporter. He diagnosed the case as *Strangulated Hernia Bursting externally, producing Fecal Fistulæ*. Small doses of calomel were given with the desired effect—the bowels acting freely and at the same time the fistulæ were discharging intestinal contents. The fistulous openings are not large enough to allow all the contents of the bowels to escape; hence not an artificial anus. The history of the case is not complete as to gastric disturbances, etc., in the early part of the trouble. This was nature's method of relieving the patient.

Meeting of August 5th.—Dr. Goode reported a very rare and interesting surgical case of *Fracture of the Facial Bones*, due to a fall from a moving railway car. The superior maxillary bones on both sides were completely severed from the other bones; the inferior maxillary was broken in two places, at one condyle and at the symphysis; the nasal bones were also fractured. The tongue and soft palate were completely cleft; there was very great deformity of the face; the patient was unable to swallow, due to paralysis of the muscles of deglutition. A tube had to be passed into the stomach through which the patient was nourished. Literature on fracture of superior maxillary bones was searched and but little was said of it by authors. By calling in the aid of a dentist, an interdental splint was improvised, and it acted splendidly and the patient is doing well.—*Ala. Med. Age*, Sept., 1893.

ORIGINAL COMMUNICATION.

(Accidentally omitted from its proper place on page 611.)

ART. VII.—Subinvolution of Uterus, and its Treatment by Electricity.*

By CHAS. G. CANNADAY, M. D., of Roanoke, Va.,

MEMBER AMERICAN MEDICAL ASSOCIATION; AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION; BRITISH GYNÆCOLOGICAL ASSOCIATION, LONDON; PAN-AMERICAN MEDICAL CONGRESS, ETC., ETC.

Sir Jas. Simpson's "subinvolution;" Scanzoni's "chronic parenchymatous metritis;" Klobe's "habitual hyperæmia, with profuse proliferation of connective tissue;" Edis' "metritis;" Hodges' "irritable uterus;" Lisfranc's "engorgement;" Kiwisch's "infarctus," and Noeggerath's "diffuse interstitial metritis," or any other name that may describe the enlarged and engorged condition of the uterus, only recalls to the practitioner, up to a few years since, the stubborn and unyielding condition he has to treat. To Sir Jas. Simpson we are more indebted than to any other for accurately defining and calling and attention to its frequency and treatment. One of the first to describe its macroscopical and microscopical appearance was Snow Beck, in 1851.

Its *ætiology* is interesting in the extreme. Everything that could have been credited with producing a pathological condition of the pelvic organs has been claimed as an exciting cause, but it seems that a large number of those cases coming under observation have followed abortions, lacerations, twin-pregnancies, and similarly enlarged pregnant uteri (viz: large children, hydramnios, etc.), and in those delicately constituted as to uterine development. This will cover a wide field; and to this might be added another very frequent cause, viz: the practice of using ergot at some time during labor, which stimulates the contraction of the unstripped muscular fibre, producing a quasi-tetanoid spasm of the uterus, which subsequently fails to contract sufficiently to induce involution.

* Read before Pan-American Medical Congress in Washington, D. C., September 6th, 1893.

As to *histology*: The bulk of the investigators concede that the uterus consists of unstriped muscular fibres in the highest state of development, varying in length from one one-hundred and tenth to one-fortieth of an inch, as it is found in the unimpregnated or gravid state; also yellow elastic, fibrillar, and homogeneous connective tissue, round spindle-shaped, and irregular cells (Thomas' elementary fusiform fibre-cells), serous membrane, mucous membrane, nerves, blood vessels, and lymphatics.

During gestation, the muscle-cells enlarge to ten times their size in the unimpregnated uterus. All the remaining anatomical structures of the uterus during gestation are enlarged. After parturition, the uterus should rapidly decrease, until in four to six weeks it has attained its normal size. This change is the result of the fatty degeneration of the muscular fibre, with the subsequent absorption of this fatty material and its removal from the uterus. This is brought about by the impaired nutrition, the result of the chronic contraction of the unstriped muscular fibre, which contraction should be immediate and permanent after delivery; otherwise, the nutrition of the cells is not impaired, foundation for excessive amount of connective tissue is laid, and normal involution cannot obtain.

As all writers recently have had occasion to regret, the pathological facts are very scanty as to this disease, which has had a recognized position in gynæcology for the last forty-five years. It is evident to all observers that there is an excessive amount of tissue present in the uterus, and that there is also quite a defective condition of both the circulating and lymphatic systems. No clear and concise limits can be definitely fixed between the pathology of some forms of chronic metritis and subinvolution. Mary Putnam Jacobi, under a very careful study of the subject, found the muscular fibres enlarged, with nuclei disappearing, and smaller fibres with indistinct central nuclei; others still smaller, in which the nuclei were distinct; while in another variety no nuclei were discovered, but granular and oil globules were found, and that the wasting

of the cell began in the protoplasm and ended in the nucleus. She found among these fibres nucleated connective tissue cells and amorphous tissue. The blood-vessels and lymphatics were very much enlarged and intimately connected with the muscular tissue, which she considers a strong diagnostic point from chronic metritis, as she herself and DeSiney have shown that in the latter a perivascular condition is present.

Its *diagnosis* is generally easy, when we remember that an abortion or pregnancy must be present as a starting point. Hanson finds that involution extends over a period of twelve weeks; but that in two-thirds of the cases the uterus has returned to normal in from six to ten weeks. Weakness of the back, excessive lochial discharge, or the appearance of menorrhagia, may be the most important symptoms found during the puerperium. Evidently, in the first stages, we have hyperæmia and congestion; a large, flabby uterus, with the thickness of the walls increased, and the sound reveals an enlarged uterine cavity; the mucous membrane bleeds freely. Whether this be chronic metritis or subinvolution of uterus, following abortion or confinement, matters little in the treatment.

As to *treatment*: That, other than electricity, will only lightly be touched upon.

As prophylactic, clearing well the uterus of clots, the use of weak antiseptic vaginal injections, refraining from the use of ergot, or any of its kindred drugs at any time in labor; or, if used during labor, it should be continued for several days after labor at suitable times to induce and maintain contraction of unstriated muscular fibre, and to induce physiological malnutrition, so necessary for the fatty degenerative process common in normal involution. Tonics, baths and drugs, hastening absorption, with nutritious diet, will accomplish much in building up the system. Vaginal injections of hot water, 110° or 115°, using three or four gallons once daily, with pledgets of cotton every third night, inserted up the vagina, saturated with anhydrous glycerine and boro-glyceride, with the application of iodized

phenol on a cotton-wrapped probe, or, better still, by a few drops injected into the cavity of the uterus with an intra-uterine syringe, provided the os is patulous, will all hasten the cure. If the os is very much congested, a Buttle's scarificator plunged into the cervix, and the congestion relieved in this way will do much good toward aiding a cure.

But the greatest amount of good can be accomplished in the least time by the proper application of electricity. The detection of subinvolution is generally not accomplished as early as the tenth day, from the fact that any symptoms referable to this are not generally attributed to this cause; but if it is detected at so early a stage—that is, at ten days—and the intra-uterine dimensions are found to be 10 cm., and much tenderness does not exist, we should use the medium Engleman coil, having a length of 200 metres and a diameter of .7 millimetres, with the bipolar vaginal electrode, after the manner suggested by Apostoli—using as powerful a current as the patient is able to stand to accomplish the object. This is to be continued for five minutes: then discontinued for five minutes, with the electrode in same position, when the current should be re-applied for a period corresponding the same length of time, when the electrode should be removed. If a more powerful effect is desired, the intra-uterine bipolar method should be tried, having the proximal pole of the intra-uterine electrode stop at the os, and the distal as far toward the fundus as it will reach, pressing it alternately to the posterior, anterior and lateral portions of uterus. This is to be used with Engleman's coarse coil, having a diameter of 1.4 millimetres and a length of 66 metres, with a strong current.

But in failing to effect involution in this manner, as will often be the case, owing to such a sensitive condition of parts, or to the infiltration of tissue being so abundant and so organized as to preclude any certain results from the treatment, we must adopt another. The writer is mainly influenced by Hanson's observations as to diagnosis of subinvolution; and if at the second week a uterus is found varying from 8 to 13 cm., at the third week from 7.5 to 10.5,

and at the fourth week from 7 to 9 cm., and fifth week from 6 to 9 cm., it is concluded that subinvolution is to be dealt with. And, provided symptoms are present as above described, the case is treated on a different plan, by aiming, first, to reduce the engorged and congested condition; secondly, to absorb hyperplastic elements; and thirdly, to restore tone to the muscular and vascular structures. This consists of, first, positive galvanic intra-uterine application of at least thirty milliamperes from eight to ten minutes, and if much tenderness exists and pain is induced, this is to be followed by the vaginal bipolar application of the faradic current from a coil having a diameter of .225 millimetres, and having a length of 600 metres, after the method as described by Engleman. By this means the uterus is relieved of engorgement, the unstriated muscular tissue composing the uterine walls is strengthened, and the walls of the blood-vessels are restored to their normal contractile powers. The capillaries are relieved of their hyperæmic condition, and the process of involution is in every way aided. Bipolar intra-uterine faradization must be carried out to be effective in this instance by the bipolar intra-uterine sound.

If the subinvolution has passed the stage of active congestion, involution may be hastened by using the negative pole of the galvanic current—intra-uterine—especially if the uterus presents a hardened condition. In several instances in which ergot was freely used during labor, the author has used the daily application of the faradic current to the uterus for seven or eight days, as used by Trippier and Apostoli, of Paris, and in each instance with the happiest results, and is of the opinion that this should be used in all cases where ergot has been freely used during labor, strict antisepsis being carried out in each instance.

By this method described, subinvolutio uteri can be cured in one-half the time consumed by any other means than electrical.

Dr. Lophthorn Smith, of Montreal, Canada, in discussing the paper, gave his endorsement to it fully and had found it always efficacious.

Dr. Sprague, of Detroit, spoke of the method as undoubtedly being the most efficacious known to him.

Dr. G. Betton Massey, of Philadelphia, could fully endorse the paper and the treatment as the only reliable and prompt method for subinvolution.

Dr. Hays, of Chicago, was very much interested in the paper, and could give it his endorsement, having used the galvanic current in most cases of some duration.

Analyses, Selections, etc.

Tolerance to Nitro-Glycerin Easily Acquired.—Limitations of Use of the Drug in Chronic Nephritis.

Dr. D. D. Stewart, Lecturer on Clinical Medicine, Jefferson Medical College, Philadelphia, recalls (*Therap. Gaz.*, Sept., 1893,) a case of polyuria reported in which, nitro-glycerin having been prescribed, the patient, in less than a year from beginning this drug, through acquired tolerance to its effects, was taking about 18 grains daily. Several cases of rather promptly acquired tolerance to nitro-glycerin have been reported in the past year.

In the *Polyclinic* (Aug. and Dec., 1888,) Dr. Stewart related a case of chronic nephritis, in which, in less than six months after an initial dose of one drop of a one per cent. solution of nitro-glycerin, such tolerance was established that 50 minims of a ten per cent. solution (five minims pure nitro-glycerin) were taken *four* times daily, with less effect on vascular tension than the initial dose of $\frac{1}{100}$ grain.

Too readily acquired tolerance to nitro-glycerin is not rare, the difficulty being to so carefully and intelligently regulate its administration that, while maintaining a constant slight effect on blood-pressure, the increase in dose is as gradual as possible. In his case, in which 20 minims of pure nitro-glycerin were taken daily, the patient had not been encouraged to increase the dose beyond an amount sufficient to produce more than a *slight* physiological effect—a feeling of trifling fulness in the head. Yet, despite admonitions as to care in gradual increase, the patient, knowing the nature of his ailment, and believing that great curative power must reside in a drug, the name of which suggests so much, and the effects of which on the vascular

system were so promptly and powerfully exerted, apparently advanced the dose more rapidly than necessity demanded. Noting this, the drug was several times, at a few weeks' intervals, temporarily discontinued, a much smaller amount being directed to be taken on resuming it than that last used; the increase was also to be very gradual. Notwithstanding this, and careful directions as to the best mode of taking nitro glycerin, doses of 50 minims of a ten per cent. solution four times daily were soon reached and continuously taken without the occurrence of any headache whatever, but slight transient flushing of the face, and no very marked effect on arterial tension, as shown by the sphygmograph.

He often encounters cases in which similar inconvenient doses could be as promptly reached, with as little systemic effect as in the case just narrated, were a too rapid increase to be permitted. Where it is desired to employ this drug over a considerable period for its effects on blood-pressure, the best rule of administration is to so proportion the dose that the intervals are comparatively short—never less than four times daily—and the amount, thought sufficient to produce some subjective or objective effect, never more than that just necessary to cause the *slightest* feeling of fulness in the head or to slightly quicken the pulse; these last are certain indications that other physiological effects desired occur. Unless unusual susceptibility exists, if enough is always taken to produce a more marked immediate result, such as flushing and slight headache, tolerance is soon acquired, and a quantity may be early reached altogether impracticable of administration. Where a rather rapid increase seems necessary to maintain a constant effect, an equally important point is to temporarily discontinue the drug for two or more days, at intervals of two or three weeks. On its resumption a much smaller initial dose will be required to produce physiological effects than that last taken.

Nitro-glycerin has, so far as we know, absolutely no action in cases of chronic nephritis apart from its effect upon vascular tension. It is only indicated in those cases in which the blood-pressure is persistently markedly high, and in which consequences, such as cerebral hæmorrhage or valvular disease of the heart, or stretching of its cavities, are to be feared. Cerebral hæmorrhage is a late complication. It requires for its production not only vigorous heart-action, but also weakened (generally aneurismal) cerebral

vessels. Valvular disease of the slow sclerotic form, commonly mitral, is not infrequently encountered in cases of granular kidney of long duration, in which cardiac hypertrophy has kept pace with prolonged arterio-capillary resistance. As Mahomed long ago showed, the pathological conditions underlying the cardiac condition in these cases is oftener recognized than that in which a leaking mitral has resulted from an overstretched ventricle. These various more or less remote sequences of persistent raised arterial tension—save perhaps the last, to prevent which both nitro-glycerin and a heart- tonic may be required—are late phenomena, and usually less to be dreaded than certain more immediate results from undue lowering of vascular tone.

A moderate amount of tension is probably actually conservative. It seems to be recognized that those cases of chronic Bright's disease in which tension is persistently low from the outset are actually of much more gravity than the commonly-observed variety with raised vascular tone; and when arterio-capillary resistance shows a tendency to fail voluntarily, scanty urine, with more marked albuminuria, and dropsy may be expected.

Much more was originally expected of nitro-glycerin as a remedial agent in conditions of persistent high tension than has been realized. Dr. Stewart now employs it less frequently in such cases than formerly, endeavoring, at first at least, to bring about the same effect by limiting the nitrogenous intake and maintaining a free action of skin and bowels. The influence of constipation in heightening blood-pressure is well known, but this fact is not always applied in therapeutics, and the modifying effects of diet are even less attended to. Nitro-glycerin and the nitrites temporarily lower pulse-tension without influencing the ever-present cause. The latter, if not arterio-capillary fibrosis—then little controlled by any measure—is nitrogenous waste in the blood. Free action of the emunctories tends to overcome this, but the fountain-head must be sought for permanent relief. Remarkable effects may be produced by diet on arterial tension in granular kidney.

Emergency Tracheotomy.

Obstruction of the air passages often demands instantaneous action, and assistance a block away may be of no more use than if it were a hundred miles. Within a few years, a stranger died on a train between Chicago and St.

Paul from œdema of the glottis, as shown by the post mortem, and during the past summer a healthy young man perished from the same cause here in St. Paul, in the very heart of the city, with a dozen physicians living within a block, and two actually present when he died ; no attempt being made to open the windpipe. Since it may be the lot of any medical practitioner to meet with such a case at any time, it is worth while to consider how an emergency tracheotomy can best be done, even without the ordinary appliances for the operation.

A number of valuable suggestions about the details of performing a tracheotomy are contained in a lecture delivered in the Royal College of Surgeons by Bernard Pitts, who urges all the preparations it is possible to make in the way of disinfection and the administration of at least a little chloroform, which, if properly given, does not increase the risk. In Germany, much use is made of local anæsthesia in the form of a freezing spray of ether or rhigolene, which will very quickly render the skin insensitive, and helps, also, by holding the hæmorrhage in check. After cutting through the skin and fascia, the point of the knife should not be used if it can be helped, but the tissues divided preferably with the handle of the scalpel. One of the great points is to keep exactly in the middle line of the neck ; another is to be sure that the trachea has been reached, to open it in the middle line and to make a big enough opening. An assistant with retractors will be a great help ; but with only unskilled assistance, the surgeon will do better to depend upon his thumb and finger placed on the sides of the trachea to separate the flaps of the incision. Retractors may be improvised by bent pieces of wire, or, if there is a woman about, hairpins may be obtained and bent into a useful shape.

The main thing is to get a hole in the windpipe, and to keep it open. If no tracheotomy tube is available, the wound must be held open in some way until one can be obtained. Here again the hairpin will come into good play ; its points bent over will hook back the edge of the tracheal wound, and with one hairpin placed in this way on each side of the opening, the rounded ends may be united by a tape passed around the neck, and so a temporarily permanent apparatus extemporized.

If the patient be a child, it will be well to roll it in a sheet first of all, for convenience of handling during the operation and to prevent its getting its hands to its neck

afterwards. One of the commonest mistakes of inexperienced operators is to be in too much of a hurry to insert the tube. It is always necessary to see first that the trachea is not blocked by blood, membrane or a foreign body; and a little delay will always make it certain that the trachea is really open. Not a few operators of skill and experience have mistaken the deep fascia for the trachea, and have inserted the tube entirely outside of its proper seat. It will be remembered that a mistake of this kind was made upon the late Crown Prince of Germany, and the unpracticed tracheotomist, in the light of such an error in high quarters, must see the necessity of taking unusual precautions to avoid repeating the blunder.

Emergency tracheotomies may be done under a variety of circumstances, sometimes with all the appliances at hand, and again with not even a scalpel within reach. But a jack-knife, or even a pair of scissors, may be made to answer for making a hole in the crico-thyroid membrane, the best point of attack with such implements. There is no emergency where the physician can be of more use than in a sudden obstruction of the air passages; but when he is at hand and the patient dies unrelieved, the whole profession must lose credit.—*Northwestern Lancet*, Sept., 1893.

Treatment of Typhoid Fever by the Administration of Thymic Acid.

Dr. E. E. Wible, Attending Physician to the Homestead Steel-Works Hospital, Munhall, Allegheny county, Pa., says (*Internat. Med. Mag.*, Sept., 1893): In view of the accepted mycotic origin of the disease and its subsequent effect on the system, and especially the intestinal tract, it is but rational that the treatment to be exhibited should be anti-mycotic and antiseptic.

During the autumn and winter of 1892, Dr. Wible treated in the Homestead Steel-Works Hospital forty-eight consecutive cases of typhoid fever by the administration of five grains of thymol (thymic acid) every three hours, continuing its administration until convalescence was established, or until the patient's temperature approached the normal.

Thymol is derived from the oil of the thymus vulgaris, or common garden thyme, possessing powerful and permanent antiseptic and disinfecting properties analagous to carbolic acid and creosote, but comparatively harmless as compared to these, and does not have the disagreeable odor of

carbolic acid. It can be administered internally, either formed into an emulsion or dissolved in alcohol; but a more desirable form of administration is in pill-form, using soap or glucose as an excipient.

Dr. Wible emphasizes the efficacy of the thymol treatment by stating that of these forty-eight cases there were but three deaths: one was admitted in a moribund condition, and died within twenty-four hours; the second was admitted in the fourth week of illness, in a typhoid state, having had no medical attention during this time, and obviously improper food and nursing; the third death occurred five days after the patient's admission. Excluding the case admitted in a moribund condition, leaving but two deaths, we then have attained the very low rate of mortality of 4 per cent. The average number of days patients that recovered remained in the hospital was a fraction less than thirty. The only means of treatment reported that approaches this low death-rate is by the cold-bath plan of Dr. Brandt, employed in the German Hospital, Phil., where, in a series of one hundred and sixty selected cases, they attained a mortality of 5 per cent., and the average number of days the non-fatal cases remained in the hospital was thirty-five. The mortality in the majority of hospitals ranges from 10 to 30 per cent. The average of the highest temperatures of each case was $103\frac{4}{5}^{\circ}$. The highest temperature of any one case was $105\frac{3}{5}^{\circ}$ in the axilla, and this elevation remained for five days before it gradually lowered. The cold wet-pack was employed to lower the temperature.

The patients were all males, between the ages of nineteen and fifty-five years; their average age was twenty-six years.

The three deaths were due to exhaustion, superinduced by the typhoid poison. There were three cases complicated by intestinal hæmorrhage, but all recovered. Three of the number suffered a relapse or re-infection, and made recoveries. Of the other complications that occurred among this series, there were two cases of parotiditis, three cases of suppurative otitis, one of phlebitis and one of periostitis. With the exception of parotiditis in one case, none of these complications were present in the fatal cases.

The following are some of the special symptoms or complications which occur in some cases, and the treatment he employs in each—viz., for headache, phenacetin; for high temperature, the cold wet-pack; for insomnia, sulphate of morphine; for bronchitis, muriate of ammonium; for cardiac weakness, nitro-glycerin or whiskey; for intestinal

hæmorrhage, sulphate of morphine and ergotin hypodermically; for the diarrhœa, salicylate of bismuth; for abdominal pain or tympanites, turpentine stupes; for delirium or typhoid state, brandy or whiskey. During convalescence, he administers a pill containing quinine sulphate, iron proto-carbonate, and strychnine sulphate.

The following directions he has printed and placed in the hands of the nurses—viz.:

1. Give each patient five grains of thymol every three hours.

2. Give ten grains of the salicylate of bismuth every three hours when there are more than three or four stools in twenty-four hours.

3. Give each patient two quarts of skimmed milk every twenty-four hours.

4. Give cracked ice and ice-water freely, allowing from three to eight quarts in twenty-four hours.

5. If the diarrhœa is not marked, beef tea or chicken broth may be given once or twice a day.

6. If the diarrhœa is excessive, give nothing but milk and water.

7. When the patient's temperature rises to or above 103° , give sponge baths every half hour, or employ the cold wet-pack until the temperature is reduced below 103° .

8. For abdominal pain or tympanites, apply turpentine stupes.

9. Cleanse and disinfect the mouth with a solution of boracic acid.

10. Disinfect the stools and urine with a thick solution of the chloride of lime or a 5 per cent. solution of carbolic acid.

11. Give no solid food until the evening temperature has been normal ten days.

12. Patients may be allowed to sit up for a short time about the end of the first week of convalescence.

To Remove Wrinkles.

Quite a sensation has recently been made in Boston by the successful application of wool-fat, or agnine, to the skin, for the removal of wrinkles. When applied with rubbing, it passes directly through the skin and acts as a nutrient to the fatty tissues beneath. An ancient dame has succeeded in removing nearly all the crows-feet from around her temples, and the remedy is fast becoming very popular.—*Med. and Surg. Rep.*—*Med. Fortnightly*, Sept. 18.

Treatment of Arterial Wounds of the Hand.

In wounds of the palmar arch, compression, direct or indirect, is considered by the majority of surgeons as unreliable, inefficacious, and often dangerous, on account of the phlegmonous inflammation it may provoke. Whether the wound be recent or suppurating, immediate ligature should be applied. But it is not always possible to find the two ends of the severed artery, and when the wound has reached the deep palmar arch, it is necessary sometimes to cut the nerves, open the sheaths of the flexors, and thus expose the patient to inflammation, which terminates too frequently by disabling the hand.

On the other hand, ligatures *à distance* of the radial and cubital will not arrest the hæmorrhage if the interosseous artery or that of the median nerve attain an abnormal development. Recourse has to be had to the humeral artery, and even the axillary, but ligature of these vessels may cause atrophy or gangrene of the limb.

M. Chalmet recommends a method of treatment which he successfully tried in two cases of wounds of the palmar arch, which, as will be seen, is simple enough:—*Flexion* of the fore-arm on the arm, *moderate compression* of the wound, previously washed with an antiseptic solution, by means of a plug of antiseptic lint and held in position by a bandage.

Moderate compression of the radial and ulnar arteries by two folds of lint maintained by a band.

Immobility by means of a sling which keeps the arm close to the side and the hand against the sternum.

Rest, and daily examination of the apparatus. Taken in detail, each one of these little operations has been already put into practice. Compression of the radial and ulnar arteries were practised by Nélaton, flexion by Bichat, elevation of the arm by Gosselin, etc.; but M. Chalmet believes he is the first to employ them altogether. In any case, the treatment is worth a trial.—*Med. Press & Circul.*, Sept. 6th, 1893.

Local Anæsthesia from Aristol.

Several observers have called attention to the soothing effects of aristol, when applied to painful, exposed surfaces. This has been especially noted when aristol has been employed as a dressing for burns, bed-sores, and discharging blisters, or for irritating ulcers. At the same time, the anal-

gesic action of aristol does not interfere with the strong, healing power necessary to a prompt cicatrization of denuded areas, while it seems to favor the growth of normal, granulating surfaces. It is not easy to say just how far the power of aristol, as a local anæsthetic, may be made useful in the operations of minor surgery, but some recent experiments point to a probable new field of usefulness for this remedy in the direction cited. The following paragraph from the *Kansas Medical Journal* is quite significant as showing that the advantages of aristol as an analgesic have not passed unobserved:

"Dr. S. M. Riggs, of Muscotah, has made some interesting experiments in the use of aristol as a local anæsthetic. A hypodermic injection of a solution in glycerin was made in a kitten, with the result of complete anæsthesia. The animal made no resistance to a cutting operation, and was apparently unaware of being injured."

The advantages of using, as a local anæsthetic, the same drug which is afterward to be applied to the operation-wound as a cicatrisant, is, of course, very important.—*Ohio Med. Jour.*, Sept., 1893.

Prevention of Vomiting During Narcosis.

Joos (*Rep. in Centralblatt f. Chirurgie*, 24, 1893) claims that vomiting during narcosis can be prevented by compressing the vagus and phrenic nerves above the left cleivicle. The distal phalanx of the left thumb is pressed strongly in just above the sternal end of the clavicle, pressure being exerted with the radical side of the thumb, the flat of the hand resting on the chest. The compression should be kept up for a short time after the cessation of the retching. This procedure is said to be equally effective in chloroform and ether narcosis.—*Omaha Clinic*, Sept., 1893.

Salitonia.

The Phenique Chemical Company has placed this new preparation upon the same high plane as that occupied by its efficient antiseptics and germicides, *Campho-Phenique* and *Chloro-Phenique*.

Book Notices.

Psychopathia Sexualis, with Especial Reference to Contrary Sexual Instinct. A Medico Legal Study By Dr. R. von KRAFFT-EBING, Professor of Psychiatry and Neurology, University of Vienna. *Authorized Translation* of the Seventh, Enlarged and Revised, German Edition. By CHARLES GILBERT CHADDOCK, M. D., Professor of Nervous and Mental Diseases Marion-Sims College of Medicine, St. Louis, etc. Royal 8vo. 436 pages. Extra Cloth, \$3 net. Sheep, \$4 net. *Sold only by Subscription.* Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

This treatise aims to describe the pathological manifestations of the sexual life and to refer them to their underlying morbid conditions. The subject requires a careful scientific study of the circumstances which attend the *development* of sexual anomalies, for without such study we cannot be in position to use effectual therapeutics. Many of the details in this work are necessarily revolting; and it was a happy idea of the author and translator to leave many of them in Latin and technicalities, so as not to invite the attention of the prurient non-professional eye. The book is of especial service to the doctor in understanding many medico-legal cases, as also perversions of sexual life—some of which he may be called on to remove.

Brain Surgery. By M. ALLEN STARR, M. D., Ph. D., Professor of Diseases of the Mind and Nervous System, College of Physicians and Surgeons, Medical Department of Columbia College, New York, etc With 59 Illustrations. Octavo 308 pages. Extra Muslin Price, \$3 New York: Wm Wood & Co.

This is practically a work on trephining the skull *for diseases*. It fills, as far as authoritative assertion or proof can yet go, a long felt want. It is of as much value to the physician as to the surgeon; for it generally belongs to the former to locate the lesions for which he has to call in the aid of the latter. The practical scope of the treatise is shown by the titles of chapters. Chapter I is on diagnosis of cerebral diseases, while Chapter X describes the operation of trephining. The intervening chapters are on trephining for epilepsy, imbecility due to microcephalus, cerebral hæmorrhage, abscess of the brain, tumor of the brain, hydrocephalus, and intra-cranial pressure, insanity, and for headache and other conditions. It is a most valuable book for practitioners.

Hand-Book of Local Therapeutics. Edited by HARRISON ALLEN, M. D. Philadelphia: P. Blakiston, Son & Co. 1893. Cloth. 8vo. Pp. 505. Price, \$4. (For sale by West, Johnston & Co., Richmond.)

This book emphasizes the *local* uses of drugs, as tested or recommended by experienced teachers. The diseases which require chiefly local treatment are those of the respiratory passages, eye, ear, skin, and certain general surgical affections—including many diseases of women. Hence the great advantage of having different authors who have had special advantages in noting the local effects of various remedies. Thus, the department devoted to therapeutics in general surgery, has been prepared by Dr. Richard Harte, Surgeon to the Episcopal and St. Mary's Hospitals; to diseases of the skin, Dr. Arthur van Harlingen, Professor of Diseases of the Skin in the Philadelphia Polyclinic, etc.; to diseases of the ear and air-passages, Dr. Harrison Allen, Consulting Physician to Rush Hospital for Consumption; and to diseases of the eye, Dr. George C. Harlan, Surgeon to Wills' Eye Hospital, etc. The arrangement is an alphabetical order of remedies, each of which is described with reference to its pharmaceutical properties, then according to its physiological effects, and lastly its value in local treatment. Great care has been taken not to endorse imperfectly tried novelties. The Index of Diseases covers 31 pages, and is most valuable, as it places the names of the remedies to be used under the alphabetically arranged names of diseases. This hand-book cannot fail to be appreciated by the general practitioner as a very valuable work.

A Manual of Diseases of the Ear. By GEORGE P. FIELD, M. R. C. S., Aural Surgeon and Lecturer on Aural Surgery, St. Mary's Hospital Medical School, London. 8vo. 391 pages, with 73 Engravings and 21 Colored Plates. Cloth, \$3.75. Philadelphia: Lea Brothers & Co. 1893.

The demand for a fourth edition testifies the appreciation of the profession for this Manual—the special excellence of which consists in the plain style of description by an authoritative aural surgeon. The work is brought well up to date—in fact, includes all the essentially important advances made in otology since the former edition. For the general practitioner, this is a most admirable book, while, for the specialist, it possesses more importance, as it embodies the lessons of experience of a most able aural surgeon. The chapters are systematically arranged—beginning with anatomy of the ear, followed by chapters on the physiology of hearing, examination of patients, and then by chapters on the various ear diseases.

Pharmacopœia of the United States of America. *Seventh Decennial Revision* (1890). By AUTHORITY OF THE NATIONAL CONVENTION FOR REVISING THE PHARMACOPEIA, held at Washington, 1890. *Official from January 1st, 1894.* Philadelphia: J. B. Lippincott Co.; Agents: P. Blakiston, Son & Co. 1893.

So many changes in the Pharmacopœia of 1880 are noted in this Revision of 1890 that we find it impracticable to note them within the limits of our available space. Processes of assay are applied only to cinchona, nux vomica and opium. Allowed limits of impurities of drugs are not more rigorous than can be readily observed by any manufacturer. Atomic weights of elements are based on estimating hydrogen at 1., and the latest values published by L. Meyer and K. Seubert are adopted. The old notation of chemical formulas has been discarded. Patented or proprietary remedies are not considered. No material changes are made in the spelling of words; but in chemical nomenclature, the basylous or metallic component is placed first—thus now we are to use sodium chloride instead of chloride of sodium, etc. Tinctures, fluid extracts, etc., remain about as they were. The present Pharmacopœia contains 994 articles—90 previously official having been dismissed, while 88 new ones have been introduced. Such are some of the many changes in the Pharmacopœia of 1890, which becomes “official” January 1st, 1894.

Treatise on Ophthalmology for the General Practitioner. Second Edition Revised and Enlarged, with 140 Illustrations. By ADOLF ALT, M. D. J. H. Chambers & Co., St. Louis, Mo 1893. 8vo. Pp. xvi—330. \$3.50. (Mailed postpaid by Publishers on receipt of price.)

That the general practitioner needed such a book is shown by the fact that the first edition has been exhausted. This second edition is greatly enlarged and newly illustrated. As the Publishers' announcement reads: “The minute details, of possible interest only to the specialist, are omitted to give place to a practical and comprehensive exhibit of the principles of ophthalmology” most necessary to the *general* practitioner—it is not intended for the specialist. If the general practitioner adopts this book for ordinary eye troubles, he will be apt to consult it frequently; and, by doing so, he will often be enabled to help his patients without exposing himself to the accusation of ignorance by the specialist. This book well fills a real want long felt by the general practitioner. •

Manual of Medical Treatment or Clinical Therapeutics. By L. BURNEY YEO, M. D., F. R. C. P., Professor of Clinical Therapeutics, King's College, London, etc. With illustrations. *In Two Volumes.* Philadelphia: Lea Brothers & Co. 1893. 12mo. Pages 631 and 744. (From Publishers.)

Whether for the teacher or practitioner, this "manual" is a most serviceable one. It teaches therapeutics from the standpoint of indications of treatment. It necessarily, therefore, discusses the character of the diseases, which helps wonderfully in an appreciation of the remedies advised in a given case. The work is not intended as simply a ready-reference one, although, in an emergency, many valuable prescriptions may be copied from its pages. It is rather intended to stimulate the reader to a study of the principles of therapeutics, while the well chosen prescriptions on almost every page are intended chiefly to serve as illustrations of the principles of the text. We know of no book with which this work can be better compared than with Dujardin-Beaumetz' *Lecons de Clinique Therapeutique*. We most cordially recommend the *Manual* under notice to the favorable consideration of every practitioner of medicine who seeks to prescribe scientifically and for the good of the patient.

Re-Actions A Selection of Organic Chemical Preparations Important to Pharmacy in Regard to their Behavior to Commonly-Used Re-Agents By F. A. FLUCKIGER, Ph. D., M. D., Professor Emeritus of the University of Strasburg. *Translated, Revised and Enlarged by J. B. NAGELVOORT, Analytical Chemist to the Pharm. Chem. Laboratory of Parke, Davis & Co. Authorized English Edition.* Detroit, Mich.: George S. Davis. 1893. Cloth Large 8vo. Pp. 155. Price, \$2.

The value of this book to the pharmaceutical chemist can be most satisfactorily appreciated only by personal examination. The names of articles described are arranged alphabetically; a list of the 24 principal re-agents used in the book is given. The gross appearances of each preparation named are given in the first paragraph; then follow results of uses of re-agents as tests of the chemical, or to prove its purity. The work would seem to be invaluable to the manufacturing chemist, as it is to the laboratory worker who deals with organic chemical preparations. The volume is issued very neatly, with margins to the pages wide enough for notes and memoranda.

Heath's Practical Anatomy—A Manual of Dissections. Eighth Edition Edited by WILLIAM ANDERSON, F. R. C. S., Surgeon and Lecturer on Anatomy at St. Thomas' Hospital; Professor of Anatomy at Royal Academy of Arts, etc. With 329 Engravings on Wood. Philadelphia: P. Blakiston, Son & Co. 1893. Fcap. 8vo. Pp 744. Cloth. \$5. (For sale by West. Johnston & Co., Richmond).

While but little is new in works on Anatomy, each author has his own way of presenting his subject in order that he may the better impress the student. And now that this is the medical college opening season, it is well to bring to the attention of the profession the latest of the revised works, in order that teachers may select that one as the text-book which seems to be best arranged to impress Anatomy on the minds of their students. So thoroughly revised is this edition, as compared with the seventh, that the addition of new matter alone has swelled the size of the volume some 150 pages more than the seventh edition. The most notable improvements of the work under notice is the incorporation of the recent progress made in topographical anatomy, especially in connection with the viscera. Nearly 100 new cuts have been introduced to aid the text descriptions. The system of teaching adopted by the author consists in exposing a part and studying for the most part each tissue as the dissecting knife reaches deeper and deeper. Undoubtedly, this is an excellent guide work also for the general surgeon or practitioner. Examination into its merits enables us to recommend this book to all in search of a good, practical one.

History of the Life of D Hayes Agnew. M. D., LL. D. By J. HOWE ADAMS, M. D. With 14 full-page Portraits and other Illustrations. Royal 8vo. 376 pages. Extra Cloth, beveled edges. \$2 50 net; Half Morocco, gilt top, \$3.50 net. *Sold only by Subscription* Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

Biography is a department of literature too much neglected by the "busy doctor" of this day, many of whom unhappily have no higher aim than to satisfy selfish desires. But to place such a History as that of the Life of Dr. Agnew in the hands of the reading young doctor must impress upon him the lesson that—

"Lives of great men all remind us,
We can make our lives sublime."

The biographer, Dr. Adams, has well adopted the plan of

recording the every-day life events of his hero in order to bring out the evidences of his greatness. Strong in convictions, Dr. Agnew devoted the energy of his nature to carrying them out. To enlist him in an attainable cause seemed to be the guarantee of its success. He was a student all of his life. He studied to know; and he sought to know in order that he might demonstrate that knowledge is power. He directed the exercise of his power to the advancement of the interests of medical science. In doing this, many occasions arose to display other good qualities, and thus he grew constantly in the esteem and affection of the profession he honored and the people he served so well.

Physicians' Leisure Library. Published Monthly. Each 12mo. Price, per copy—Paper, 25 cents, or \$2 50 a year; Cloth, 50 cents per copy, or \$5 a year. Sent by mail from Publisher, Geo. S. Davis, Detroit, Mich.

This universally commended series of practical treatises, prepared by well-known authors, contains the gist of what they have to say regarding the treatment of diseases commonly met with, and of which they have made special study. Our space does not permit more than mention of titles of those numbers not heretofore brought to attention of our readers, as follows:

- Impotence and Sexual Weakness in the Male and Female.* By Edward Martin, A. M., M. D., Clinical Professor of Genito-Urinary Surgery, University of Pennsylvania (illustrated). Pages 102.
- Surgical Anatomy and Surgery of the Ear.* By Arthur H. Tuttle, M. D., S. B., of Cambridge, Mass. (With 28 original Illustrations. Reproduced from the Writer's Drawings from Nature.) Pages 109.
- The Bacterial Poisons.* By Dr. N. Gamaleïa. Translated by E. P. Hurd, M. D. Pages 136.
- Electro-Therapeutics of Neurasthenia.* By W. F. Robinson, M. D. Pages 72.
- Recent Developments in Massage—Historical, Physiological, Medical, and Surgical.* By Douglas Graham, M. D., of Boston, Mass. Second Edition. Illustrated. Pages 128.
- Sterility in the Woman, and its Treatment.* By Dr. De Sinety. Translated by E. P. Hurd, M. D. Pages 130.
- Appendicitis and Perityphlitis.* By Charles Talamon, M. D., Physician to Tenon Hospital, Paris, France. Translated by E. P. Hurd, M. D. Pages 210.

Health Resorts of Europe. By THOMAS LINN, M. D., Member of the Medical and Climatological Society of Nice, France, etc. *With an Introduction by* TITUS MUNSON COAN, M. D., of New York, N. Y. New York: D. Appleton & Co. 1893. Cloth. 12mo. Pp. 330. (For sale by West, Johnston & Co., Richmond.)

This is strictly an independent "medical guide to the mineral springs, climate, mountain, and seaside health resorts, milk, whey, grape, earth, mud, sand and air cures of Europe"—no address given is paid for. New editions will be published yearly, and all necessary changes made. The locations, the routes to reach them, the therapeutic qualities, directory of hotels, and of reputable English and American physicians and specialists resident at the European resorts are given. In short, all necessary information to the important medical stations in Europe is given from a medical point of view, "and special attention is paid to the sanitation of each station, and to its general hygiene, as well as to the cure of disease by climate and mineral waters." This statement of the scope of the work, with the additional sentence that it is well done and independent of advertising patronage, shows that this is a guide-book of immense value to invalids or those in search of the benefits of European health resorts.

Hypnotism, Mesmerism, and the New Witchcraft. By ERNEST HART, Formerly Surgeon to West London Hospital, etc. *With 20 Illustrations.* New York: D. Appleton & Co. 1893. 12mo. Pp. 182. (For sale by West, Johnston & Co., Richmond.)

This book is the reprint of articles which have appeared in the *Nineteenth Century* and the *British Medical Journal*. The author very aggressively denounces the system of hypnotism, and attributes the presumed phenomena to deceptive efforts of the patients. The author may well base his opinion on the cases he has exposed. That it may be a dangerous power for the best of the profession to possess under given circumstances cannot be denied. Yet we seek only the truth in recalling some observations which seemed to settle the question in the minds of many doctors, that there are facts in favor of hypnotism, mesmerism, and the "new witchcraft." Mr. Hart's book argues only from a few cases which he claims were impostors. But there yet remain many who are subject to hypnotism, etc. But, withal, it is a very readable work.

A Chapter on Cholera for Lay Readers—History, Symptoms, Prevention and Treatment of the Disease. By WALTER VOUGHT, Ph. B., M. D., Medical Director and Physician-in-Charge of the Fire Island Quarantine Station, Port of New York, etc. Illustrated with Colored Plates and Wood Engravings. In one small 12mo volume, 110 pages. Price, 75 cts. net. Philadelphia: The F. A. Davis Co., Publishers.

Such a book as this at this time is useful if doctors would only encourage their educated patients to read it. It is not an "alarmist," for it teaches that cholera can be easily prevented if proper measures are taken *beforehand* to abolish the conditions necessary for its development. It gives, in a most readable way, the history of the seven pandemics—including the one of 1892-93; the causes of the disease, its symptoms, diagnosis, prognosis, treatment; and especially is the "Chapter" useful in telling how to prevent the disease, how to handle an outbreak of cholera on shipboard, how to conduct quarantines, etc. Plans and formulæ for disinfection are also detailed.

Outlines of Practical Hygiene. Adapted to American Conditions. By C. GILMAN CURRIER, M. D., Visiting Physician to New York City Hospitals, etc. New York: E. B. Treat. 1893. Muslin 8vo. Pages 468. Price, \$2.75. (From Publisher.)

So nearly true has it become that Preventive Medicine is the "Medicine of to-day," instead of "the future," that he is but poorly equipped to enter upon the responsibilities of the physician who does not keep himself well informed as to matters of hygiene. In the book under notice, only accepted truths are presented as the basis of advancing opinions. The author has been especially careful to adapt the book to the conditions of American people. A large portion of the work is taken up with descriptions of bacteria and their diseases, of infectious diseases, etc., how to prevent them, etc. It is a very excellent practical work—good for text-book or the physician.

Cholera—Its Causes, Symptoms, Pathology, and Treatment. By ROBERTS BARTHOLOW, M. D., LL. D., Emeritus Professor of Materia Medica, General Therapeutics, and Hygiene, Jefferson Medical College, etc. Philadelphia: Lea Brothers & Co. 1893. 12mo. Pp. 132.

This monograph is well-prepared, and represents the views held by advanced scientists who have studied cholera

during the yet prevailing European epidemic. Like all the writings of the distinguished author, it studies the disease from the standpoint of the practitioner, with special attention to matters of therapeutics. It is probable that American practitioners will not have occasion to contend with the disease this year; but no one can predict whether or not the epidemic will reach America next year. Hence doctors should keep themselves well up in their readings on cholera. The book under notice is a first-rate one for all the purposes of the practitioner.

Editorial.

Medical Society of Virginia.

The Circular Announcement of the Twenty-fourth Annual Session of this State Society, to be held in Charlottesville, Va., October 3d, 4th, and 5th, indicates that it will be a most excellent one. Since its issue, a number of items have been gathered to show that the session will be even a greater success than was anticipated.

The meetings will be in the Armory Hall. All the railroads have agreed to "convention rates," which, in effect, requires that those who avail themselves of the rates for themselves or members of their families, shall obtain from their depot ticket agents certificates that full fare was paid going to Charlottesville. These certificates are to be signed by the Secretary of the Society during the session, and on presentation to the railroad ticket agents at Charlottesville, return tickets over the same roads will be sold at *one-third* the regular rates.

By an oversight, the name of Dr. William L. Robinson, of Danville, Va., as author of a "Report on Gynæcological Cases, with Comments," was omitted from the list in the Announcement published a month ago. Since then the Secretary has received information that papers will be presented by the following: Dr. George Tucker Harrison, of New York city; Dr. George J. Preston, of Baltimore, Md.; Dr. R. L. Payne, of Lexington, N. C. (subject, "Observations on Typhoid Fever"); Dr. William G. Rogers, of Charlottesville, Va. (subject, "Typhoid Fever as it Has Occurred in

Charlottesville During the months of July, August and September—up to 15th—1893").

In addition to the above and those given in the Announcement Circular, the following distinguished doctors have indicated their intention to be present and participate in the discussions, if they do not present papers, etc.: Drs. Wm. Osler, Baltimore, Md.; William Holland Wilmer, Washington, D. C.; John D. Myers, Huntington, W. Va.; D. M. Provence, Wilmington, N. C.; A. M. Phelps, New York, N. Y.; R. H. Whitehead, Chapel Hill, N. C.; Henry H. Dodson, Milton, N. C., and probably others.

The addition to the Fellowship of the Society promises to be very large. It is hoped that, in the meantime, all worthy doctors in Virginia not yet members will present their applications during the session in Charlottesville.

Medical College of Virginia.

As we go to press, the Faculty feel encouraged at the prospects of a good class for the session of 1893-4, opened September 26th. The building, erected over forty years ago, has recently undergone thorough repair, and many improvements in keeping with modern demands have been made in the arrangement of the lecture halls, etc. The old College Infirmary has also been remodelled in great part and adapted to the wants of a College Hospital. It was formally re-opened September 23rd, 1893, at which time a reception was tendered the profession of this city by the Faculty of the College. Good wishes attend its future. See advertisement on the white card-board between advertising pages 32-33.

Sheltering Arms Hospital.

Following the usual summer vacation, the Managers of this Hospital have secured very much better and more commodious accommodations nearer the heart of this city than the building formerly occupied. It will be opened during the present month for the reception of patients, as heretofore. Mrs. John Herbert Claiborne, President of the Board of Lady Managers, reports the prospects as very encouraging. For the most part, it is an institution to render medical or surgical services to the worthy charity. The physician in charge is Dr. M. D. Hoge, Jr., Richmond, Va., to whom all communications relating to the admission of patients may be addressed.

Virginia Hospital, Richmond, Va.

By direction of the Board of Corporators, the name of the recently established Richmond City Hospital is about to be changed to *The Virginia Hospital, Richmond, Va.* It is proposed that eventually this Hospital is to become a purely charitable institution for the treatment of patients from all parts of the State of Virginia, who may need and yet are unable to pay their way in other hospitals. When we say that Dr. Hunter McGuire is President of both the Virginia Hospital Board of Corporators and of the College of Physicians and Surgeons, Richmond, Va., the profession may feel assured of success. The Corporators of the Hospital are among the wealthiest, the most liberal-minded and the most successful business men of the State. To control the running affairs of the Hospital, there has recently been organized an Auxiliary Board of Lady Managers. About fifty ladies have already agreed to give their services to this great charity, and they will have absolute control of the domestic arrangements of this Institution. The Virginia Hospital, located at the corner of Clay and 11th Streets, Richmond, Va., deserves the moral support of every professional man in Virginia.

School of Pharmacy of the College of Physicians and Surgeons, Richmond, Va.

During the Session of the Virginia Pharmaceutical Association, held at Blue Ridge Springs, Va., September 12th-13th, a resolution was cordially adopted endorsing and recommending the School of Pharmacy of the College of Physicians and Surgeons, Richmond, Va., to all proposing the study of Pharmacy in Virginia. We are glad to learn that the prospects for a good initiatory class are very flattering. The Session will open October 3rd, in common with the other Departments of the College.

St. Luke's Home, Richmond, Va.

After the usual summer vacation, Dr. Hunter McGuire's Private Hospital (St. Luke's Home) opened September 15th for the reception of patients. It is filling up very rapidly, there being at the time of going to press only a few rooms unoccupied. This is the eleventh year of this valuable institution—Dr. McGuire having established it in 1883. We wish it continued success.

The College of Physicians and Surgeons, Richmond, Va.

That there was a demand for this Three Years' Graded Course College in Virginia is evidenced by the number of applicants for matriculation in advance of the opening of the Session of 1893-'94, on Tuesday, October 3rd. It is confidently believed that, notwithstanding the bad times financially through which the country is passing, the number of matriculates this first year will equal the number in any of the medical institutions of this State since the war. The buildings, at the corner of Clay and 12th Streets, will be ready, and the equipments for the several professional chairs are daily arriving. Students should report at the College for matriculation on Tuesday, October 3rd. The formal opening of the College will be by an address by Prof. Thomas J. Moore, at 12 o'clock Wednesday, October 4th, after which hour the curriculum will be regularly carried out. Arrangements have been made for an abundance of clinical material. It is a pleasing fact that a number of the matriculates have been drawn from other States by the esteem in which some of the most prominent of the Faculty is held by them and their friends at home. It may be confidently asserted that the success of the College of Physicians and Surgeons, Richmond, Va., is assured.

The Virginia State Board of Health

Will hold a quarterly meeting in the city of Charlottesville, Tuesday night, October 3rd, 1893. This will be an important meeting, as some important changes in the law under which the Board is serving will be considered. The essential value of a properly authorized State Board of Health to the welfare of a Commonwealth cannot longer be considered a matter for discussion.

Messrs. Sharp & Dohme, Manufacturing Chemists,

Have removed their *General Offices* from Baltimore to 41 John street, *New York city*, in order the better to serve the interests of their constantly increasing trade. There will be no change in either the personnel of the firm, or the general business policy maintained for the past thirty years. Their recently enlarged and completely equipped *Laboratories*, however, will remain in Baltimore. We sincerely wish this most excellent firm a full realization of every expectation it has as the result of this new move. See advertisement on last cover page.

Revision or No Revision of the Code of Ethics—That's the Question.

The Recording Secretary of the Medical Society of Virginia has just received the following communication from Dr. Wm. B. Atkinson, of Philadelphia, Pa., Permanent Secretary of the American Medical Association:

Dear Doctor:—At the session of this Association held May, 1893, it was

Resolved, That the respective State Medical Societies entitled to representation in this Association, and through them their affiliated local societies, are hereby requested to consider the matter of revision of the Code of Ethics, and report to this Association at its next annual meeting; and if any alteration be deemed advisable, each State Society so deciding, to specially indicate the part to be changed, and write out in full the new form proposed.

Resolved, That the State Medical Societies in such States as do not have now legal boards for the examination of persons desiring to become practitioners in such States, are requested by this Association to use their influence to have the States create such boards by statute.

Resolved, That the several State Medical Societies are hereby requested to use their influence to have statutory restraint in their respective States placed upon the sale of poisonous and mischevous medicines, except when prescribed by legally qualified persons.

Please, in due time, inform me of the action taken by your Society. Yours very truly, etc.

A New Medical Dictionary

Is announced for early publication by Lea Brothers & Co. The author, Dr. Alexander Duane, of New York, is widely known as the medical expert for Webster's International Dictionary. His new work has been drafted to supply medical students with information concerning the words they will meet in their reading, and will be of value to practitioners also. Pronunciation is given by a simple and obvious phonetic spelling; then follows the derivation, an unexcelled aid to memory, and finally a full definition. Descriptive matter has been appended to such words as cannot be adequately explained by simple definition. Thus diseases are described, and their symptoms and treatment are given; drugs are followed by their properties, effects, doses, etc. Extensive tables of bacteria, doses, etc., are placed in the alphabet most conveniently for reference. A work of real value is promised.

Southern Surgical and Gynæcological Association.

The Secretary, Dr. W. E. B. Davis, of Birmingham, Ala., has started out on his usual active round of work for the successful meeting of the Association in New Orleans, La., on the 14th, 15th, and 16th days of November, 1893. This of course means that the prospects are splendid for a successful meeting. Members of the medical profession are cordially invited to attend. Dr. Bedford Brown, of Alexandria, Va., is President of the Association, and the weight of his name, coupled with the renown of the Association as established by his distinguished predecessors and associates who compose the membership, give guarantee that the deliberations of the Sixth Annual Session in New Orleans will have all the importance of a session by eminent authorities. It is earnestly requested that those who may be preparing papers for this Session will promptly notify the Secretary, Dr. Davis, in order that the Announcement, soon to be issued, will show the value of the papers to be presented and discussed.

Proposed Change of Time of Meeting of American Medical Association, 1894.

A special Committee of the American Medical Association met for the purpose of recommending a change in the date of the next annual meeting of the Association in San Francisco, Cal., in 1894. This Committee has not the power to change the meeting time; but after a short discussion of the matter, it recommended to the General Business Committee of the Association a change from the first Tuesday in May, 1894, to the third Tuesday in May. This change is desired because it will afford a better opportunity for physicians generally to attend at that time, and it is expected there will be 1,500 members present.

Dr. C. W. P. Brock.

In noting the proceedings of the Section on Railway Surgery of the Pan-American Congress, it is pleasing to his friends, as it was just to the merits of the Address, to note that the *Washington Post* said: "For actual literary merit and gracefulness, the welcoming address of Dr. C. W. P. Brock, of Richmond, Va., will compare favorably with any similar speech."

First Pan-American Medical Congress.

We cannot attempt more than a synopsis of some of the papers of this wonderful meeting of representative doctors of most of the countries of the North and South American Continents, held in Washington, D. C., September 5, 6, and 7, 1893. Whatever may have been the influences of others in aiding the efforts of the moving spirit of this unique assemblage, it is due to the Secretary-General, Dr. Chas. A. L. Reed, of Cincinnati, Ohio, to say that without his indomitable energy and well-directed work, at immense sacrifice of personal interests at home, this Congress would not have been the great success it was. The Local Committee of Arrangements, under the chairmanship of Dr. S. S. Adams, did its full duty, with a result that was surprising as to the exact fitting in of details. The social events were all of the most enjoyable kind. The attendance was over 1,000. It was remarkable with what fluency most of the foreign doctors spoke the English language—thus removing one of the chief troubles apprehended as to the thorough benefits of the Section meetings, etc. On other pages we spare as much space as we can in this issue to a running account of the papers and discussions. The Second Pan-American Medical Congress is to be held in the City of Mexico in response to invitation by Mexican Government.

Hon. Robert T. Barton, of Winchester, Va., for the Court of Appeals of Virginia.

The medical profession in Virginia is deeply interested in whatever concerns Mr. Robert T. Barton. As the attorney for the Medical Examining Board of Virginia, he has worked practically, untiringly, gratuitously, and most effectively for the best interests of the medical profession. He has written opinion after opinion for the Board upon mooted points in the law, and recently, at the request of the Board and Medical Society of Virginia, has re-written the law regulating the practice of medicine and surgery for presentation to the Legislature during the winter session of 1893-'94. The medical profession owes Mr. Barton a large debt of gratitude, and individually and collectively should urge his appointment to the high office to which his friends wish to see him elected. To those who are not so familiar with his high qualifications, we will say that he will wear the mantle as gracefully and honorably as the most gifted jurist who has ever adorned the Court of Appeals of Virginia.

Virginia Pharmacal Company, Richmond, Va.

It gives us pleasure to note the evidences of successful operation of this company under its present business management. The superintendent and chemist gained prominence in the pharmaceutical profession during his experience of over fifteen years in some of the best laboratories in this country. A prime purpose of this company is to introduce pharmaceutical preparations of the highest degree of excellence and efficiency, and so maintain them. In fact, it is the special desire of this Company that physicians will notify it of any irregularities noticeable in their products, in order that immediate and thorough investigation as to the cause may be instituted, and that as near perfection as possible may be secured. Note extra two pages advertisement between advertising pages 8 and 9.

Obituary Record.**William Beverley Towles, M. D.,**

Died about midnight of September 15th, 1893, at his residence at the University of Virginia. The cause of death does not seem to be certain, but the end was hastened by a severe hæmorrhage. Dr. Towles was born at Columbia, Va., March 7th, 1847. He received his academic education from the University of Virginia, from which institution also he graduated as Doctor of Medicine in 1869. In 1872, he joined the Medical Society of Virginia, and attended several sessions. On the death of Dr. J. Staige Davis, he was elected Professor of Anatomy and Materia Medica in the University of Virginia, which position he filled with such distinguished ability—especially the chair of Anatomy—as to gain for himself a national reputation as Professor of Anatomy. His services were in demand by other Colleges; and, indeed, he served as Professor of Anatomy in the University of Vermont in Burlington for years. His duties in Burlington began each March and continued till the Summer vacation, when he returned to the University of Virginia. He was a member of the Association of American Anatomists, and of the Virginia State Anatomical Board. His popularity with students was always great; in fact, for their medical education many selected the institutions with which he was connected because of the widely known pop-

ularity, coupled with his known ability as a teacher of anatomy. The University of Virginia must suffer severely by his death—especially at this time, when the session of 1893-94 had just begun the day before his unexpected death.

In evidence of the esteem in which Dr. Towles was held by the profession in other places than at the University of Virginia, at a called meeting of the *Lynchburg [Va.] Academy of Medicine*, held Tuesday, September 19, 1893, the following preamble and resolutions were adopted:

We, the members of the Lynchburg Academy of Medicine, having heard of the sad death of Professor William B. Towles, of the University of Virginia, do hereby resolve,

1. That in the death of Professor William B. Towles, the Faculty of the University of Virginia has lost one of its ablest members, and one whose loss can be filled only with the greatest difficulty, and that not only the University and the State of Virginia, but the medical profession of the whole country, shares in this loss.

2. That the students who have sat at his feet and absorbed some little of the vast store of knowledge which he possessed, and which he could so well impart to others, realize that he towered above other men, not only in stature, but in intellect as well, and deeply regret his death, feeling that they have lost not only a gifted scholar and teacher, but also a friend, as he has always proved himself to his pupils. His great heart seemed to cling to his scholars, as does that of but few professors.

3. That we sympathize most tenderly with the bereaved family in their sore affliction.

4. That a copy of these resolutions be sent to the family of the deceased, one to the *Charlottesville Progress*, and one to the *Virginia Medical Monthly*, for publication.

Signed by Committee: JOHN W. DILLARD, M. D.,
JOHN M. WALKER, M. D.,
A. I. CLARK, M. D.,
C. M. BLACKFORD, JR., M. D.
A. W. TERRELL, M. D.,

At a meeting of the Faculty of the College of Physicians and Surgeons, Richmond, Va., resolutions of regret and sympathy were also adopted, and Professors Jacob Michaux and Edward McGuire were appointed a committee to put the resolutions in proper form for record in the minutes of the Faculty meeting.

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ART. I.—Obstructions to the Function of Micturition, and the Results.*

By R. L. PAYNE, Jr., M. D., of Lexington, N. C.

In considering the subject of obstructions to the function of micturition, it is well that we should first recall the forces by which the bladder is controlled.

It is not necessary to our purpose, however, that we should discuss the anatomy of this organ, except such portions thereof as are concerned in the act of urination, and therefore we shall only ask attention to its musculature and innervation.

The muscular coat of the bladder consists of three layers of pale, involuntary muscular fibres. The external layers

* The Essay to which the *Dr. Hunter McGuire's Prize of One Hundred Dollars* was Awarded during the Twenty-fourth Annual Session of the Medical Society of Virginia, held in Charlottesville, Va., October 3-5, 1893. Six Essays were presented in competition. The Committee of Award consisted of Drs. Hugh T. Nelson and E. M. Magruder, of Charlottesville, Hugh M. Taylor and Edward McGuire, of Richmond, and John W. Dillard, of Lynchburg. The paper to which this Prize was awarded was signed "Rusticus."

have their origin from the posterior portion of the body of the pubes in both sexes; and in the male, fibres may also be traced to the prostate gland and its capsule.

From the point of origin these fibres pass more or less longitudinally upward, over the anterior aspect of the bladder, across the fundus of the organ, and thence along its posterior surface, to be inserted into the prostate in the male and the anterior vaginal wall in the female.

At the sides of the organ these fibres run more or less obliquely and often intersect one another. This layer, especially the aggregation of fibres found on the posterior wall, is called the *detrusor urinæ* muscle.

The second layer is usually called the circular layer, though, especially toward the apex of the organ, these fibres take an oblique direction; but the nearer we approach the neck of the viscus, the more completely transverse is their arrangement, until at the neck and beginning of the urethra they are disposed as a thick circular band—the so-called *sphincter vesicæ internus*. Next to the circular layer we find a thin reticulated layer of muscular fibres, having an arrangement for the most part similar to that of the external longitudinal layer. The bladder may, then, be regarded as simply a hollow muscle, whose fibres run in all directions, so that, when they contract, the capacity of the organ is symmetrically diminished in all its diameters and its contents forced out. The normal retention of urine is, however, due to the consentaneous action of other muscles. In part, no doubt, retention is effected by the aggregation of circular fibres arranged so closely about the vesical neck, but the experiments of Budge prove conclusively that the influence of the *sphincter vesicæ* of the anatomist is a very small factor in the physiological retention of urine, and Henle even questions the existence of such a muscle. The *compressor urethræ*—which, arising from the ramus of the pubes, passes transversely across and encircles the whole of the membranous urethra, from the prostate to the bulb, unites with its fellow of the opposite side—is the true sphincter of the bladder; and this is no doubt efficiently

aided by the action of the bulbo-cavernosus, and, when the bladder is only moderately filled, by the inherent elasticity of the circular muscular fibres found so abundantly in the submucous tissue surrounding the urethra, especially in the prostatic and membranous portions. The musculature of the bladder is in part supplied by the sympathetic and in part by the cerebro-spinal system of nerves.

The fundus and body of the organ are abundantly supplied from the hypogastric plexus, while the base, and especially the neck, is innervated by the fourth sacral nerve.

The compressor urethræ is also under the control of the sacral plexus of nerves, and it may be well to note through other branches of this same plexus an interesting pathological relation is established between the bladder, the rectum, and adjacent structures. In the spinal cord about the second, third and fourth sacral nerves an automatic center is supposed to exist, which maintains the tonic contraction of these sphincter muscles. A little higher in the same region of the cord it is assumed there is situated a reflex center through which the detrusor muscular fibres of the bladder are excited to contraction. Both these spinal centers are controlled by a third center in the brain located in or about the restiform bodies. *En passant* it may be well to notice that the reflex center in the cord through which the act of defecation is excited lies in close proximity to the reflex center for micturition.

(In cases of retention of urine in young children, it is often the case that an enema thrown into the rectum will so stimulate both the centers for defecation and the genito-spinal center for urination as to bring about micturition without catheterism—a proceeding always dangerous in young children unless anæsthetized.)

The automatic and reflex centers in the cord are connected with the sphincter and detrusor muscles by both afferent and efferent nerve fibres.

When one wishes to urinate, the desire being excited

either by too great fulness of the bladder, the irritant character of the urine, etc., an impression, made upon the sensory or afferent nerves of the parts described, is carried both to the automatic and reflex centers in the cord, and from these is transmitted along the sensory tract to the genito-urinary center in the brain. If it be proper that the act of urination take place, an impulse is now sent along the cord to the automatic center and the action of the sphincter muscles inhibited. At the same time an impulse is carried to the reflex center, which further stimulates it into action and thereby forces the detrusor fibres into action with consequent expulsion of the urine. In the foregoing description we have a picture of physiological micturition, and holding clearly in view the forces necessary to the retention and expulsion of urine, it is very easy to see that the function of micturition is dependent for its normal performance on the co-ordinate action of the motor, sensory and sympathetic nerves supplying the urinary apparatus, as well as upon the integrity of the muscular structure; and hence, in all cases of obstructed micturition, the first duty of the attending surgeon is to seek to know whether or not these natural forces are capable of performing their functions

The question will naturally first arise, Do such lesions exist in brain or cord that proper afferent impulses are no longer transmitted to the brain, or that suitable afferent impulses are no longer formed in the cerebral centre, or being formed can no longer be transmitted by the cord? These sources of retention being eliminated, one will at once raise the question, Does the automatic centre respond to inhibitory impulses of the brain, or is it goaded by sympathetic irritation, reflected through its sensory connections with neighboring organs into such intensity of action as to hold the sphincter urethræ in a state of tonic contraction, so great that the inhibition of the cerebral centre is no longer felt? Finally, these causes being eliminated, the question must naturally follow, Is the integrity of the detrusor

muscular structure of the bladder intact, or has it so degenerated as to be unable to respond to proper stimulus?"

Familiar examples of the first named causes are found in cases of shock, organic diseases of the brain or cord, or their envelopes, such as tumor, inflammations leading to compression by inflammatory products, effusions into the sub-arachnoid space or ventricles, extravasations of blood, and various degenerative changes in the motor or sensory tracts as well as the circulation in the blood of various poisons—as in low febrile states—which produce more or less complete abeyance of the cerebral functions. Familiar examples of the second class of causes will be found in the irritation of hæmorrhoids, operations about the anus or prepuce, strangulated hernias, etc.; while the third cause will be found present whenever such frequent or prolonged retention has occurred from any cause as to lead to degenerative changes in the muscular fibres of the bladder, during the degenerative changes consequent upon cerebral palsies, etc., etc.

These various causes of obstructed micturition will only be referred to in this paper—the symptoms and diagnosis being part of the history of the various diseases in which they occur as symptoms, and the purpose of this paper being rather to present a study of obstructions occurring in the course of the urinary tract than a consideration of those extrinsic causes which form a part of the general study of disease. It is also foreign to our purpose to discuss the more or less complete retention of urine which results from occlusion of the ureter, either by spasm of the bladder closing the ureteral orifice, spasmodic or organic stricture of the ureter, the closure of the lumen of these ducts, completely or in part, by the presence of calculi or the pressure of tumors growing from without; but as the term micturition implies the simple expulsion of urine from the bladder, we shall devote the remainder of this paper to a consideration of those causes of obstruction found in the course of the urinary tract from the bladder outward.

PART FIRST.—*Causes of Obstructed Micturition found in the Bladder.*

- 1st. Inflammation of the vesical neck.
- 2nd. Pseudo-membranous cystitis.
- 3rd. Cystitis with epidermoid concretions.
- 4th. Hæmorrhage and retained blood-clots.
- 5th. Stone in the bladder.
- 6th. Tumors of the bladder.
- 7th. Foreign bodies introduced from without.
- 8th. (a) Dislocation and (b) sacculation of the bladder.
- 9th. Rupture of the bladder.

1. *Inflammation of the vesical neck* is produced by various causes, the most common of which are the irritant character of the urine from the presence in excess of the products of destructive metamorphosis or the excretion of certain poisons as cantharides, turpentine, etc.; extension of other inflammations by continuity of tissue, as gonorrhœa; the passage of septic catheters; various traumatic causes, as the rough use of catheters and bougies; injuries done by the passage of the child's head in parturition, and contusions received through the perineum during rough horse-back exercise, or by falls and blows on the perineum, etc.

The earliest symptoms are obscure pains in the region of the bladder accompanied by chilly sensations and usually followed by more or less fever. Soon the pains become exceedingly distressing in the perineum and about the anus; scalding pain is felt about the whole urethra; there is constant desire to urinate, accompanied by severe vesical tenesmus, but in spite of every effort of the patient there is obstinate retention of urine, the bladder becoming distended above the pubes, where it may be felt as a rounded, elastic, exquisitely sensitive tumor. The immediate cause of retention in this condition is the spastic contraction of the sphincter muscles through irritation communicated to the automatic centre in the cord by the sensory nerves of the inflamed area. In general cystitis, on the other hand, mictu-

riktion is frequent, though in many cases the bladder is never completely emptied.

2. *Pseudo-membranous cystitis* is a very rare affection, seldom occurring except in conjunction with croupous and diphtheritic inflammations elsewhere. Gross, however, describes it as sometimes secondary to "cholera, typhus, the exanthemata, pyæmia, and as a result of direct violence and the irritation produced by decomposing urine, carcinoma, calculi and foreign bodies." A slight membranous formation is said to be characteristic of the cystitis produced by cantharides.

The symptoms of this form of cystitis do not differ from those of acute inflammation of the bladder, except the local and constitutional disturbance is more intense, and there is greater involvement of the nervous system. During the progress of the affection, the membranous exudate which covers more or less entirely the mucous membrane of the bladder, may, as a result of suppuration, separate in part, or as a whole, and cause retention of urine either by blocking up the cervix of the organ or by shreds passing into and filling up the urethra. The differential diagnosis between acute cystitis with destruction of tissue, is exceedingly difficult, and can only be made by careful macroscopic and microscopic examination of the exudate which may be found in the urine or at the orifice of the urethra.

3. *Cystitis with epidermoid concretions* is one of the rarest of all pathological freaks, and yet cases of cystitis do occur which are characterized by the very excessive growth of epithelium and its rapid falling off. Rokitansky speaks of such phenomena being a sequence of chronic cystitis. In such cases, epithelial masses, varying in diameter from one-twenty-fifth to one-half inch, are formed, and may pass into the vesical neck or urethra and obstruct the outflow of urine. Obstruction to urination will also sometimes occur in cases of cystitis as a result of the excessive secretion of mucus collecting in the neck and bas-fond of the bladder.

4. *Hæmorrhage into the bladder with blood clots* may result

from various constitutional causes, such as malaria, purpura, scurvy, typhoid fever, and in fact from all the blood dyscrasæ accompanied by low blood-pressure; from the congestion of the mucous membrane of the urinary tract by irritant diuretics, such as turpentine and cantharides; but is most frequently due to causes localized in the urinary apparatus. Of these local causes may be mentioned external injuries about the region of the kidneys, inflammation of these organs or the presence of malignant growths involving their structure, the passage of calculi along the ureters, the presence of ulceration, varices, various tumors, or stone in the bladder, injuries done to this viscus by falls or blows inflicted on the perineal or hypogastric regions, the rough passage of catheters, bougies, etc., the presence in the mucous membrane of the urinary tract of the parasites *bilharzia hæmatoba*, the *filaria sanguinis hominis*, and in very rare instances the *strongylus gigas*. Finally, it is well to remember that in hæmorrhage into the urethra from any cause, blood may flow back into the bladder. It is not the purpose of this paper, however, to enter into the diagnosis of these various causes, but simply to call attention to the fact that under all these conditions, hæmorrhage, often profuse in quantity, may occur at any moment and prove a most troublesome obstruction to micturition. If the blood be long retained in the bladder, clots will form which, passing into the urethra, mechanically obstruct urination or, collecting in the vesical neck, dam back the urine, or, collecting in quantity, produce spasm of the sphincter muscles as is the case with other foreign bodies; and then, if the use of the catheter is attempted, the eye of the instrument may pass into a mass of clots, or what is more frequent in my experience, the lumen of the instrument will be filled with a sort of half-clotted, viscid blood which effectually occludes its caliber.

Hæmorrhage may be suspected as a cause of obstructed micturition if the retention be accompanied by "frequent desire to micturate, spasm of the neck of the bladder, and a burning sensation along the course of the urethra," associa-

ted with the escape of blood per urethram, or its presence in the catheter used to withdraw the urine.

5. *Stone in the bladder* is another source of obstructed micturition, and this may result either from the stone passing partially into, and more or less entirely blocking up the urethra; from the calculus being washed into the neck of the bladder, and thus interrupting the flow; or from the irritant effect of its presence in the bladder, the sphincter muscles of this organ are goaded into tonic contraction, and no longer respond to the inhibition of the genito-urinary centre.

Morbid frequency of micturition; more or less alteration in the character of the urine with its occasional admixture with blood; pain in the glans penis, and frequently about the anus, most marked during and after the act of urination, are the classical symptoms of stone, and when these symptoms accompany or have preceded signs of obstructed micturition, the surgeon will at once proceed to explore the bladder with an appropriate sound, and thus determine whether or not a calculus is present. In this connection, it may not be out of place to mention the fact that after the operation of lithotomy there is occasionally retention of urine from inordinate swelling of the wound, spasm of the urethra, or the presence of blood clots filling up both the wound and the urethra.

6. *Tumors of the bladder*, though comparatively rare, are sometimes a cause of obstructed micturition. The most common neoplasms found in this viscus are the fibrous, the sarcomatous, and the carcinomatous tumors, though quite a number of the myomatous and a few cases of the osseous variety are on record. Sir Henry Thompson has also recorded two cases of dermoid cysts found in the bladder, though such cases must be extremely rare, as these are the only recorded cases. Of the fibrous tumors there are several varieties, viz.: the tuberous fibroma, the papillary fibroma (the most common of all), and the polypoid fibroma.

These growths are most frequently found springing from the trigone or neck of the bladder, and in this situation they frequently prove a cause of retention of urine. The

most reliable symptoms of tumor of the bladder are pain, frequent desire to micturate, with occasional interruption of the flow, and in some cases actual retention of urine, and more or less constant hæmaturia.

When such symptoms exist apart from calculus or prostatic disease, tumor should be suspected, and diligent search made in the urine for such debris as is from time to time cast off by these neoplasms and voided during urination. Failing to find such evidence in the urine, if the symptoms persist the bladder should be explored through the perineum after the manner recommended by Sir Henry Thompson, and thus the diagnosis determined. The varieties of tumors most frequently causing absolute retention are the sarcomatous and the polypoid fibroma, and in these hæmorrhage is a less common symptom than in any other form of vesical tumor.

7. *Foreign bodies from without* have frequently been introduced into the bladder, either designedly or as the result of accident or disease, and in some cases have caused troublesome obstruction to urination.

Masturbates have frequently had bits of pencil, straw, etc., slip from their grasp into the bladder, and the surgeon has more than once broken off the end of his catheter or bougie, and had the chagrin of having it pass beyond his control into this organ. Extra-uterine pregnancies have sometimes discharged bits of bone, teeth, and other foetal debris into this viscus; and Gross tells us that "serous, hydatid and dermoid cysts developed originally in the kidneys, the pelvic cavity, the ovaries or the fallopian tubes are sometimes discharged from the urethra, or found after death floating loose in the bladder;" while the records of military surgery furnish the histories of many cases of gunshot wounds, in which bullets, shreds of clothing, and splinters of bone have been driven into the bladder, and lie loose in its cavity. Under such circumstances, the presence of the foreign body will give rise to pain, spasm, frequent micturition, and sudden stoppage of or complete obstruction to the flow of urine. The diagnosis in these cases is based upon

the history of the case and careful exploration with the sound.

8. (a.) *Dislocations and herniæ of the bladder* are of sufficient frequency to demand notice as among causes of more or less complete retention of urine. Many cases have been reported in which portions of the bladder have been found forming part of the contents of the hernial sac when the protrusion occurs in the usual situations. Instances are on record in which the whole bladder has passed into the scrotum through the external abdominal ring. In other cases a portion of the bladder has been found forming a tumor in the groin; in others, the hernia has occurred through an opening caused by separation of the recti-muscles, and in still others the protrusion is into the perineum. Such cases as these occur in either sex, but in women there are other causes of displacement at work which do not come into play in the male. The bladder may be drawn upward by an ovarian tumor or the pregnant womb, or backward by a retroverted womb, if, as a result of an old inflammation, adhesions between these bodies have occurred, and the relations of the urethra so disturbed as to lead to a very troublesome form of retention, in which catheterism is practised with great difficulty.

In the same way, by reason of adhesions, this viscus may be drawn to one side, as in an interesting case reported by Skene, in which a supposed ovarian tumor proved to be the bladder. In the female, however, by far the most common dislocation is downward into the vagina, forming the so-called cystocele. Anything which tends to produce relaxation of the vaginal walls, such as prolonged leucorrhœa, rupture of the perineum by taking away one of the natural supports, or prolapse of the womb, dragging down the bladder in its descent, will favor the development of this displacement.

In all these malpositions of the bladder there is more or less complete retention of urine; that is, the flow of urine is either entirely prevented, or the displaced portion retains more or less—always pocketed.

There are usually present frequent desire to micturate, with more or less vesical tenesmus. In some cases there is partial incontinence of urine, by reason of dilatation of the urethra in its upper third, though the bladder is never completely emptied, and the retained and decomposing urine provokes a cystitis, the pains of which are added to the evils of simple displacement. In the downward, backward, and lateral displacements, a dragging pain is often felt in the umbilical region, due to traction on the urachal cord.

(b.) *Sacculation of the bladder* is another cause of retention of urine more or less complete. The origin of this condition is always to be traced to some obstruction to micturition, with resulting hypertrophy of the muscular walls of the bladder and forcing of the mucous lining of this organ between the meshes of the network of muscular fibres during straining efforts at micturition. In this way sacs or pouches are formed, varying in capacity from a few drops to many ounces. These diverticula are never emptied of their contents, except by accidental changes in the position of persons so afflicted, and, as a result, the patients suffer all the evils growing out of the retention of decomposing urine. There are no characteristic symptoms by which sacculation of the bladder can be certainly diagnosed during life.

9. *Rupture of the bladder.* Though this cannot be classed, except in a sort of negative sense, among obstructions to micturition, at the same time the symptoms which accompany retention following this accident are so similar to those resulting from real obstructions that it may be well to briefly note them in this connection. The accident may occur as the result of the over-distention of a bladder whose coats are already softened and weakened by disease; and, under these circumstances, any sudden movement of the body, even the succussion of the abdominal viscera produced by laughing or coughing, may prove sufficient to precipitate the evil. Usually, however, rupture of the bladder is the result of direct violence sustained in the hypogastric or

pelvic regions, such as a blow, a kick, or crushing between two hard surfaces when the organ is more or less distended with urine.

The symptoms are usually sudden, severe pain in the hypogastrium, followed by grave symptoms of shock; constant desire to urinate, with inability to void water; the escape oftentimes of a little blood from the urethra, and the failure of the catheter to evacuate the urine when passed into the bladder. After a time more or less reaction occurs, followed by grave peritonitis.

PART SECOND.—*Obstructions Found in the Prostatic Urethra and Prostatic Gland.*

1. Lesions of the verumontanum.
2. Cysts of the sinus pocularis.
3. Inflammation of the prostate.
4. Hypertrophy of the prostate.
5. Prostatic calculus.
6. Tumors of the prostate.

1. *The verumontanum or gallinaginous crest* is liable, from its situation, to become acutely inflamed, as well as to chronic enlargement.

The usual causes of acute inflammation are gonorrhœa; the extension of inflammation from surrounding tissues; irritant diuretics and direct injuries such as may be sustained in horseback exercise, the use of the catheter, etc. Chronic hypertrophy of this part is no doubt usually one of the consequences of acute inflammation with increased development of connective tissue and interstitial deposits.

In either case, the calibre of the prostatic urethra may be seriously encroached upon (cases being on record in which the crest attained the size of a walnut), thus offering an obstruction to micturition often difficult to overcome. The symptoms present in such cases are much the same as those due to enlarged prostate, a differential diagnosis being usually impossible during life.

2. *Cysts of the sinus pocularis*, due to congenital closure of the opening of this cul-de-sac in the prostatic urethra, and

the consequent retention of the secretion of the numerous glands which empty therein, are by no means rare causes of obstruction to micturition in the new-born. Dr. Jos. Englich, of Vienna, in a large number of dissections, met with this trouble in fully 7 per cent. of all male infants examined.

There are no characteristic symptoms; but in the absence of imperforate prepuce and occlusion of the meatus in the new-born, cysts of the sinus may be safely diagnosed if there be retention of urine and a bladder distended above the pubes.

3. *Inflammation of the prostate gland, or prostatitis*, the result of the extension of a gonorrhœal inflammation; the suppression of the cutaneous perspiration in persons of a rheumatic tendency; or, of direct injury, as from the rude passage of instruments, fragments of calculi, rough horseback riding, etc., etc., may prove a sudden source of obstruction to the outflow of urine—both extremely painful and difficult to manage.

The symptoms are a growing sense of weight, fullness, and throbbing pain felt in the rectum and perineum; frequent desire to micturate accompanied by tenesmus, and diminished volume in the size of the stream of urine; the passage of a few drops of blood with the last drops of urine expelled from the urethra; pain felt in the head of the penis at the close of micturition, and rectal tenesmus with flattening of the fæces.

The finger in the rectum will detect the gland much enlarged, bulging back into the bowel, and exquisitely sensitive to the touch. There is usually present a high grade of fever with general constitutional disturbance.

4. *Chronic hypertrophy of the prostate gland* is one of the most frequent of all obstructions to micturition. Essentially a disease of advanced life, many have regarded this trouble as one of the necessary changes of old age; but careful *post-mortem* investigation has shown that less than twenty-five per cent. of all old men suffer from enlarged prostate, and clinical study demonstrates that in no sense must hypertro-

phy of this gland be regarded as one of the retrograde changes resulting from advancing years. Senile hypertrophy of the prostate is due to increased nutrition and development of the muscular and fibrous elements of the organ, the glandular cells being largely squeezed out of existence, though, in the softer variety of enlarged prostate, the acini are sometimes found increased in size in proportion to the other histological elements of the gland.

Being the result of increased nutrition, the affection is always caused by prolonged chronic engorgement, and is too constantly the tribute which age pays for the excesses of youth. Gonorrhœa, frequent, excessive venereal indulgence, the congestion resulting from stricture of the urethra, are the usual causes of the disease; while calculous and other diseases of the bladder, stimulating beverages and diuretics, gout, rheumatism and external violence, are all regarded as passing causes.

Enlargement of the different lobes of the organ is rarely uniform. At times, one of the lateral lobes is so much more enlarged than the other that it bulges to the opposite side so far as to give the urethra a distinct bend along its projecting surface; in other cases, one lobe will become enlarged at one point and the opposite lobe at another, giving the urethral canal a tortuous sort of S-shaped bend, which renders the passage of a catheter well-nigh impossible. By far the most constant, however, is enlargement of the middle lobe, blocking up the urethra, or sometimes extending as a polypoid projection into the bladder, where it acts as a ball-valve, effectually shutting off the stream of urine.

The symptoms of enlarged prostate are so gradual in their onset that little attention is given them till they have become so pronounced as to be the result of irremediable change. Gradually increasing frequency of micturition; growing feebleness and diminution in the size of the stream of urine; pain and scalding sensations felt along the urethra, and in advanced disease in the glans penis, especially at the close of urination; great straining, with bending forward of the body and straddling of the legs in the effort to micturate,

and finally sudden attacks of retention of urine mark the progress of the malady.

In the presence of such symptoms, there is little danger of mistake, but the diagnosis is made sure by the insertion of a finger into the rectum, when the enlarged gland may be readily felt bulging backward into the bowel.

5. *Prostatic calculi* occasionally cause obstructed micturition.

Normally, in the prostatic fluid, are found microscopic concretions due to inspissation of this fluid. These are often very numerous, and at times, by ulcerative absorption, the prostatic tissues will be broken down, and a number of these little bodies collecting together, become cemented into a single mass, which, by reason of the irritation resulting from their presence, provoke a separation of the phosphatic salts of the prostatic fluid, and this being deposited about the calculus, adds greatly to its hardness. The symptoms denoting the presence of such foreign bodies are gradual failure of the general health; pain and a sense of weight in the perineum; increasing frequency of micturition; and finally, if the mass becomes very large, or projects into the urethra, complete retention may result. The diagnosis is always difficult, but may be determined by the use of the sound, together with a finger in the rectum.

6. *Tumors of the prostate*, producing obstruction to micturition, are most frequently fibro-myomatous in character, though carcinoma and sarcoma of this gland have frequently been observed.

The fibro-myomata are generally found as accompaniments of hypertrophy of the prostate, and give rise to no symptoms by which a differential diagnosis may be determined. Occasionally these tumors rise by a slender pedicle from the middle lobe of the gland, and, projecting into the bladder, act like a ball-valve in the neck of that organ, seriously interfering with the discharge of the urine.

Carcinoma of the prostate is usually of the epithelial variety, and is rarely met with before middle age. The new growth usually involves the whole gland, and its earliest symptoms

are those of obstructed micturition. There are present difficult urination; retention and incontinence of urine, as in ordinary hypertrophy; more or less constant pain along the urethra, in the glans penis, radiating through the loins, the sacral region, and often down the thighs. The finger in the rectum discovers the prostate enlarged and exquisitely tender, which is not a symptom in simple hypertrophy. The enlarged pelvic glands may be felt by the rectal touch, and there is usually present induration of the glands of the groin. The cancerous cachexia is well marked.

Sarcoma of the prostate rarely occurs except in infancy and early boyhood. Its symptoms are increasing difficulty of micturition, followed by retention of urine. The finger in the rectum discovers a soft, rapidly-growing tumor in the prostatic region, and there is rapid loss of flesh and strength. Pain is rarely felt except when provoked by pressure from without. There is no glandular involvement.

PART THIRD—*Obstructions to Micturition Found in the Urethra.*

- 1st. Congenital occlusion and occlusion by foreign bodies.
- 2nd. Lacerations of the urethra.
- 3rd. Tumors of the urethra.
- 4th. Stricture—spasmodic and organic—of the urethra.
- 5th. Dislocations of the urethra.
- 6th. Obstructions seated without and bulging into the urethra.

1. *Occlusion of the urethra* from congenital defect, either at the meatus or at any portion of the penile urethra, is occasionally found a cause of retention in the new-born. The diagnosis is readily determined by inspection and the passage of a sound. Much more frequently, however, occlusion of the urethra is due to the blocking up of the canal by various foreign bodies, such as blood-clot, inspissated mucus, false membranes, impacted calculi, and quite a variety of foreign bodies introduced from without. In occlusion due to for-

eign bodies there are usually present severe pain, priapism, frequent desire to micturate, with more or less complete retention of urine, and often considerable constitutional disturbance. The diagnosis will be established by careful palpation along the urethral tract and the passage of the catheter.

2. *Lacerations of the urethra* form one of the most difficult of all causes of retention to overcome. The causes of this accident are, most frequently, external violence, such as shot-wounds, falls, kicks, or blows upon the perineum, though it is sometimes the result of the rough passage of catheters or bougies; the violent straining which often attends efforts at urination in cases of stricture, or even as a result of violent erection of the penis. The extent of the laceration varies from the slightest rent in the urethra to complete division of the canal. The diagnosis is based on the history of the case, together with such attendant symptoms as sudden, sharp, burning pain in the urethra; slight discharge of blood from the meatus; and frequent desire to urinate, while the act is very imperfectly performed, or there is complete retention. If the catheter be now passed, a peculiar grating sensation is imparted to the hand of the operator when the point of laceration is reached, which is almost infallible evidence of the nature of the lesion.

3. *Tumors of the urethra* are found as an occasional cause of obstructed micturition. In the male, the most common varieties of tumor are the fibrous polypus and the villous fibroma. These usually spring from the navicular fossa, but may arise from any portion of the urethra, where they give rise to few symptoms until they have attained sufficient size to provoke dysuria, and in rare cases retention of urine. In the female, both the varieties of tumor above referred to occur, and, in addition, many of the sex suffer from that most painful affection, urethral caruncle. This neoplasm usually springs from the walls of the urethra just within the meatus, but may grow from any portion of the tract and occasionally projects slightly into the bladder.

They are very insidious in their development; exquis-

itely sensitive to the slightest touch of the dress or the contact of the urine, and they provoke sharp pains shooting down the thighs, radiating through the pelvis, and up the back, increased by the slightest exercise, so that the life of the poor sufferer is often rendered entirely miserable. They render the bladder excessively irritable, and each attempt at micturition is attended by greatly increased suffering. The stream of urine is often mechanically obstructed by their presence, or reduced to a thread by reason of spasm of the urethra from the resulting irritation. The diagnosis of tumors of the urethra is made from the history of the case, careful palpation of the parts, and thorough inspection both with the unaided eye and with the endoscope.

4. *Stricture—spasmodic and organic—of the urethra*, is, next to enlarged prostate, by far the most frequent of all causes of obstructed micturition. Spasmodic stricture, due to contraction of certain muscular fibres surrounding the urethra, may be produced by disordered secretions, or as a reflex effect of various affections of the kidneys, the bladder, and the rectum, and is a frequent cause of retention of urine. Organic stricture is the result of the deposition of inflammatory new material and its subsequent organization in the mucous and sub-mucous tissues surrounding the urethra. Stricture may result from any inflammation occurring in these tissues, its most frequent causes being gonorrhœa, traumatism, and the constant congestion maintained by masturbation. The deposition of lymph which results in stricture may occur at some point in all the tissues surrounding the urethra, thus producing a circular constriction of the canal, or it may occur on one side of the urethra, the resulting enlargement bulging into this channel, and thus diminishing its calibre. Strictures may be single or multiple. When found singly they are most frequent in the beginning of the membranous urethra, and when found located within an inch of the meatus almost certainly one or more coarctations will be detected in the deeper urethra. The diameter of all organic strictures constantly grows less and less. The inflammatory deposit becomes more highly

organized with age; the cells are converted into contractile fibrous tissue, and the tendency being to constantly increasing contraction of the urethra, unless relief be afforded, this canal is finally occluded.

The symptoms of stricture are usually a gleet discharge; a constantly-growing diminution in the size of the stream of urine with a tendency of the stream to sputter and twist and split up into several streams; there is difficulty in starting the flow in the act of micturition, and retention of the last few drops which hang in the urethra at the close of urination. There is also inability to propel the stream of urine which comes, with weakened force, in a dribbling stream, and finally there is complete retention. The general health suffers in proportion to the local trouble. There are present disordered digestion; pains in the loins, back, and perineum, and the patient often labors under the most distressing mental depression. The diagnosis is determined by the subjective symptoms and by careful exploration with the bulbous bougie.

5. *Dislocations of the urethra* are an occasional cause of dysuria in the female. The upward displacement is generally due to the bladder being drawn upward by pelvic tumors or the pregnant womb. The displacement downwards is generally the result of the downward pressure of the child's head upon the anterior vaginal wall and the urethra during parturition, but the accident may be one of the results of lacerated perineum. In the upward displacement there are occasional attacks of dysuria, or even retention, which are difficult of relief because of trouble encountered in passing the catheter. In the downward dislocation, if the prolapse is limited to the upper third of the urethra, there usually results dilatation and incontinence of urine; but if there is complete downward displacement, there is always dysuria, and often retention. The diagnosis is determined by the vaginal touch and the conjoined use of the sound.

6. *Obstructions seated without and bulging into the urethra* may cause retention of urine. Among the most common of these causes may be mentioned infiltration of urine; extravasated

blood; abscesses near the urethra; exostoses of the pelvic bones, or malignant or other tumors growing in the pelvis; displacements of the uterus, as in retroversion, where the cervix may press upon and block up the urethra, and in rare instances foreign bodies, such as bullets lodged near the urethra, have been known to so press upon this canal as to occlude its lumen and render micturition impossible. Imperforate prepuce is an occasional cause of retention in the new-born, and I have several times seen the preputial orifice in the adult so small, from congenital defect, or the vicious healing of a chancre, that in urination the water would distend the prepuce like a bladder, requiring to be milked out before the act could be completed. The diagnosis of all these conditions can only be made by a careful study of the history of each case and a painstaking investigation of local conditions.

PART FOURTH.—*Results of Obstructed Micturition.*

Having thus briefly treated of obstructions to micturition, we will now consider the Results of such Obstructions.

These are much the same in character, no matter what the nature of the obstruction—the principal differences being due to the length of time the impediment has existed; whether it is partial or complete; and if it be located in the urethra certain changes will occur in this part of the urinary tract, as well as in the bladder, the ureters, and the kidneys. It may also be well to note that in obstructions located in the prostate or bladder the resulting changes in the bladder differ somewhat from those lesions following obstructions located in the urethra anterior to the prostate gland.

If the retention be sudden in occurrence and complete in character, as may occur in spasmodic stricture of the urethra, impacted calculus, etc., then the patient suffers the most agonizing pains. There are frequent straining efforts at urination, the urine either passing in little spurts or jets, in quantity too small to bring any sense of relief, or not a drop escapes. There is usually considerable constitutional

sympathy as manifested by rise of temperature, extreme thirst and restlessness, and finally the typhoid state may be developed and followed by coma and death. If the retention continue, the bladder, becoming more and more distended, rises above the pubes into the abdominal cavity, presses upon the rectum (thus hindering the passage of the fæces), and finally impedes the movements of the diaphragm, so as to seriously interfere with respiration.

The constant straining efforts at urination frequently provoke a prolapse of the vagina in the female and of the rectum in both sexes, though this accident is more liable to occur in cases of chronic obstruction. If the retention be of long continuance, the bladder becomes so distended, and in consequence its walls so attenuated, that rupture may occur during the violent straining efforts to pass the water, and the urine escaping into the peritoneum, death speedily supervenes as a result both of the violent inflammation excited and the absorption of septic urine; or, what is more frequent, the ureters are dilated, the urine dammed back into the pelvis of the kidneys, and as a result of the hydrostatic pressure, these organs no longer secrete, and the patient dies with all the symptoms of uræmia.

Short of these fatal results, there are other evils arising from complete retention. The retained urine decomposes; urea is split up into its component elements, and as a result, ammonia is set free in the cavity of the bladder. The irritation resulting from the action of the ammonia on the mucous membrane of the organ sets up a cystitis; the coats of the bladder are softened, and the inflammation may progress so far as to terminate in local patches of gangrene, thus adding materially to the danger of rupture. Again, as a result of the extreme distension of the bladder, its nerves are so overstretched as to lose their power of transmitting motor impulses, and hence results that most troublesome affection, atony of the bladder; or the muscular structure of the bladder may so degenerate as to be no longer able to respond to the stimulus of innervation, and so, though the retention be relieved for the time being, the pa-

tient must resort again and again to the use of the catheter, his life grows more and more a burden, and he may finally die, worn out by constant suffering and the irritation set up by frequent catheterization.

In obstructions which are slower in their development, and in which the tendency to retention becomes constantly more and more pronounced, the changes resulting vary somewhat from those detailed above.

In obstructions located in the urethra—and of such obstructions organic stricture may be regarded as the type—the urethra will be more or less dilated back of the obstruction, the extent of this dilatation varying from the slightest enlargement of the canal to such great dimensions as to form a sort of secondary bladder, and being in proportion to the tightness of the stricture and the force with which it is necessary that the urine be driven against it in order that the bladder may expel its contents. In addition to dilatation of the urethra, the mucous membrane just behind the obstruction, and in some instances in front as well, will be found in a low grade of inflammation; the mucous glands of the tract enlarged and pouring from their patulous mouths a thin, glairy secretion, or even ulceration may have occurred.

Finally, as a result of the loss of elasticity of the urethra by reason of inflammatory deposits, the thinning of its walls by dilatation, or the weakening due to ulceration during the violent straining efforts by which the bladder seeks to propel the urine beyond the obstruction, the walls of the urethra may give way, allowing extravasation of urine to occur into the surrounding tissues with all the grave consequences of such an accident. If the rent be small, and only a few drops of urine escape, then peri-urethral abscess will form and probably result in urinary fistula. If the tear be greater, then there will be infiltration of urine into the surrounding tissues, followed by extensive mortification and sloughing of the parts, accompanied by low typhoid symptoms, and terminating in coma and death if speedy relief is not obtained by free incisions and escape of the

poisonous fluid. The prostate gland is also liable to certain troubles as a result of obstructions seated in the urethra. Inflammation and suppuration of this gland often occurs, the development of prostatic calculi is favored, and atrophy is a not infrequent consequence of the backward pressure of the urine upon the gland as a result of a decided obstruction seated in the anterior urethra. It is also noteworthy that in cases of stricture the whole urethral tract may become hyperæsthetic; the seminal ducts are invaded by the sub-acute inflammation affecting the urethra; the mouths of the ducts grow patulous, allowing a more or less constant oozing of semen into the urethra; the testicles are often the seat of distressing neuralgic pains, and epididymitis arises from sympathetic irritation. In addition to these lesions in the urethra, certain evils involve the bladder also. So soon as the obstruction in the urethra becomes sufficiently great as to be an obstacle to the free passage of the urine, the bladder is compelled to contract with greater force, in order that its contents may be expelled, and as a result, hypertrophy of its walls speedily follows. This hypertrophy affects to a slight degree the areolar tissue underlying the mucous membrane of the organ, but is chiefly confined to the muscular fibres, which often attain a bulk five or six times greater than the normal, the fasciculi forming prominent ridges upon the mucous membrane, which Gross has not inaptly compared to the columnæ carneæ of the heart.

Another important point in the hypertrophy of the bladder following urethral obstruction is that it is generally a *concentric* hypertrophy, the walls not only being thickened, but the cavity of the viscus is very much contracted, often so much so that its capacity is limited to an ounce, or even a half ounce of urine at any one time. In addition to these changes, the frequent violent contractions of the hypertrophied muscular layers in the effort to expel the urine often forces the mucous membrane of the organ between the meshes of the muscular fibres, thus forming pouches or

sacs, in some instances of even greater capacity than the normal cavity of the bladder. From the same cause arises dilatation of the vesico-prostatic plexus of veins, forming varix of the bladder, and often giving rise to troublesome hæmaturia as the result of rupture or ulceration. Finally, as a result of retained and decomposing urine, certain ptomaines are developed and septic symptoms may arise, or from the irritating effect of the ammonia set free in this decomposition and the constant tenesmus, the mucous membrane of the organ is usually in a state of chronic inflammation, the enlarged glands pouring out a thick, tenacious mucus, the surface much congested in patches and covered with sabulous deposits or with flakes of adherent lymph; while the whole mucous lining may be in a state of suppuration or deeply ulcerated in spots. The retention and decomposition of urine also greatly favors the development of stone.

The inflammatory process is apt to extend by continuity of tissue from the bladder, developing a ureteritis, or further into the pelvis of the kidney, lighting up a most intractable pyelitis. Finally, as a result of the obstructed micturition and contracted bladder, the urine is dammed back, the ureters often enormously dilated, and the pelvis and calices of the kidney so distended as to cause destruction of the tubules and malpighian tufts, converting the kidney into a cyst—a true hydronephrosis—or, as a result of the hydrostatic pressure, the urine is no longer secreted, and the poor sufferer dies with all the symptoms of uræmia.

Changes in the bladder, the ureters and kidneys similar to those detailed above as due to urethral obstructions, occur if the impediment to micturition be seated in the prostate gland or bladder. The same conditions of the mucous membrane of the bladder, the same inflammations and dilatations of the ureters and kidneys, and the same evil effects upon the secreting structure of the kidneys as have been described in enumerating the evils following urethral obstructions, will be found in vesical and prostatic obstructions, and hence it needs not that they be repeated. In the

hypertrophy of the bladder following prostatic and vesical obstructions, there are some points of difference from the description given of the same trouble in urethral obstructions.

In prostatic hypertrophy, the bladder is usually affected with *eccentric* hypertrophy, and instead of being contracted, as is the case in stricture of the urethra, it is often enormously dilated, so that it holds many times its normal quantity of urine. In stone in the bladder, on the other hand, there is usually concentric hypertrophy and contracted bladder; while in carcinoma there seems to be no rule, the bladder being sometimes contracted and at other times dilated, the muscular hypertrophy being always in proportion to the gravity of the obstruction and the length of time it has been in existence.

Another result of obstructions to micturition is incontinence of urine. This arises under two conditions. In cases of tight stricture situated near the beginning of the membranous urethra, the fibres of the compressor urethræ, or, as I have styled it, the sphincter vesicæ externus, frequently degenerate so that all muscular contractility is lost, and hence, there being very little controlling power, the urine dribbles away more or less constantly, this tendency being further encouraged by the contracted bladder, usually present in such cases, which is capable of retaining only a small quantity of urine at any one time.

On the other hand, in cases of eccentric hypertrophy, the bladder is often enormously dilated and is nearly always filled with urine. Under these conditions, there is at length complete paralysis of the sphincters vesicæ, and urine dribbles away incessantly, though the bladder is never empty.

The latter form of enuresis has been aptly styled the "incontinence of retention." Various disturbances occur in the surrounding organs in cases of chronic obstruction. The testicles are often exceedingly painful and sometimes markedly enlarged; the rectum is frequently prolapsed and the patient distressed with hemorrhoids, the result of the intense straining efforts to empty the bladder, and in some

cases from the same cause even hernia has been produced.

Finally, in all cases of chronic obstruction to urination the general health suffers more or less.

The patient is worn out with pain and loss of sleep, the tongue is coated, the appetite capricious, and the digestion seriously impaired; pains in various parts of the body, both reflex in origin and due to imperfect elimination of effete material by the kidneys, are frequently added to the local distress, and at length the poor sufferer either becomes the victim of hopeless hypochondriasis or death brings welcome relief.

ART. II.—Complications in Abdominal and Pelvic Surgery *

By JOSEPH PRICE, M. D., of Philadelphia, Pa.,

HONORARY FELLOW MEDICAL SOCIETY OF VIRGINIA.

In participating in the proceedings of the Medical Society of Virginia, it is with something of pride that I can say with Hamlet—

"I am a native here,
And to the manner born."

We come again with the experiences of an added year to our professional lives. It is not possible for us to measure each other's professional growths, but we may accept what is said here as some evidence of our zeal and hard work, and of our conscientious appreciation of the dignity and far-reaching importance of our calling. There could have been selected no more fitting place for our annual meeting than here in the old town of Charlottesville, so filled as it is with the associations of great names, here where is located an historic institution of learning, and from the classic halls of which have passed many men who reached the high water-mark of human endeavor and achievement, whose

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names are "writ large" in the history of the Commonwealth and of the nation. Doubtless there are those of this Society who come here as to familiar ground, and hear again in wakeful memory loved old college echoes, live their youth over again as they stand within the shadows of venerable college walls, recalling the names and incidents of the college lives of those who competed with them for college honors, intruding but one sad reflection—

"One by one is falling
Beneath the leaves or snow."

We should find inspiration amid such scenes and associations—some mystic touch of the genius of the past, the genius that made constitutions and statutes and history, that broadened and deepened our medical and surgical science—feel some of the pride and heroic spirit of the men who faced "guns shotted to the lips."

As we meet here amid scenes made suggestive by great teachers, we will talk about that science and art to which we have pledged our love and devoted service. Never were conditions better for good work by our association; never was the spirit of the profession more progressive. Not least of the forces operating in the evolution of medical and surgical science are these institutions. They are not bodies of men meeting for antiquarian research, but for the exchange of the facts of tested science, the careful analysis of new professional experiences and the comparison of results.

The tendency of the age is strongly toward specialization; and though our more marked advances have been largely along special lines, there has been the achievement of kindred results along all lines—kindred in having a common object.

As physicians, we are all practically interested in the diseases of women—they form a large share of general practice. Amid much that is bad, we can find the guidance of much good teaching; and it is after the best lessons the general practitioner is looking. Give him the practical, and he is capable of forming his own conclusions. He is

not the only one who makes mistakes. His study of methods and results, combined with a varied general experience, gives him a mastery not possessed by many so-called specialists; he is better capable of determining when operative measures are necessary.

In the surgical field our work at present is largely for inflammatory forms of tubal and ovarian disease. Hundreds of operators are restoring chronic invalids to health and usefulness by removing useless disorganized organs. There is still a very strong tendency to evacuation and drainage. I have been protesting for years against such a practice, and still unhesitatingly condemn it as unsurgical. The collections of pus—tubal and ovarian—can and should always be removed. Some few operators advocating drainage also recommend sacral resection—a severe, incomplete, and unjustifiable procedure. While condemning sacral resection, vaginal incision and drainage, I would also condemn vaginal operation for small cystoma. The same reasons given for the upper operation hold good in these cases. The results have been far from satisfactory, the sequela, viz: localized inflammatory trouble, is due probably to contaminated ligatures, suppuration, ligatures expelled through the vagina.

All forms of posterior displacements, if not fully and completely corrected at the time of operation, remain a source of suffering. Localized or general, firm or feeble adhesions, complicating growths or inflammatory troubles, if not completely and thoroughly relieved, remain sources of pain and discomfort. If they follow simple, non-complicated operations, the pain and suffering is even greater than in that more grave group of cases where tolerance has been established.

Sections for ovariectomy, for hysterectomy, and for the removal of all forms of tubal and ovarian disease are no longer mere operations of election, but are firmly and authentically established procedures; they have been perfected and are in our practice to stay. In suppurative forms of tubal and ovarian disease, whether unilateral or bilateral,

the procedure is precisely the same. Vaginal incision, with drainage, is a timid and imperfect procedure. Resection of sacrum for the removal of tubal and ovarian disease is a complicated and also an imperfect operation when contrasted with the simple and direct methods practiced from above. There are a number of recently devised operations destined to short life; the older and most successful of our operators have thought such procedures over, have considered them in all their bearings, and, before even giving them a trial, they have determined, for specific reasons, against the wisdom of their adoption. It is surprising, and certainly gratifying, that such men as Martin, Leopold, Tait, Bantock and Thornton, the most successful and eminent of living surgeons, give scarcely a passing notice to the numerous new procedures. All varieties of ventral fixation, sewing the uterus to the abdominal wall, bladder, or elsewhere, are surgically irrational procedures; more suffering than relief follows them.

The French method of vaginal hysterectomy for the removal of diseased appendages is in some cases a simple and rapid operation, but it leaves pathological lesions above, which continue a menace to the patient's life. It is not so much what you remove as what you leave behind—as the result of imperfect and incompleted surgery.

Take, for instance, a bad pus case, large pus tubes, and large ovarian abscesses, completely filling the pelvic basin and universally adherent above omentum; small bowel to pus sac and sacrum and large bowel on both sides; below the adherent omentum we have adherent coils of small bowel; the appendix is also adherent on the right side to the abscess. Now, in the hands of the most trained and careful operator in freeing adhesions, bowel lesions occur from sigmoid to cæcum. To do good surgery he will remove the appendix also. He begins by freeing the adherent omentum throughout and dealing with it surgically; he next frees coil of adherent ilium and repairs all lesions; enucleation and removal of pus accumulations follow. If the sigmoid or mesentery of either large or small bowel is

injured, he repairs it. By the vaginal operation all these complications and lesions remain unnoticed and untouched. Thus we see that the vaginal procedure, as practiced, is an imperfect one. I practiced vaginal hysterectomy freely long before it was suggested by the French, and I am prepared to condemn it in unambiguous terms.

In vaginal hysterectomy for malignancy, where we have diseased and adherent appendages, I would strongly urge the section operation. I am satisfied that many bowel obstructions and deaths following vaginal hysterectomy, are due to tubal and ovarian disease antedating the operation. So-called encapsulated forms of pelvic suppuration, independent of diseased appendages, do not occur in my work, except where due to perforation or traumatism. Simple vaginal incision will not reach such conditions as we have referred to. You incise one abscess and you leave three more pus accumulations. You may incise an ovarian abscess and leave a diseased ovary to slough away, and above it you may yet have two pus tubes remaining untouched. By abdominal section and the clean removal of all pus accumulations, you are doing ideal surgery. At no other point of the body can you practice a clean removal of an abscess. Parietal abscesses are painful and defeat union. Irrigation and drainage favor greatly the prevention of localized or general peritonitis. Some operators feel and urge that it is impossible to free adhesions; they abandon cases content with a so-called exploratory incision, leaving the patient in a worse condition than before they made any attempt at surgical relief. There should be no attempt made to do abdominal or pelvic surgery by men who have not the courage, skill and experience to prosecute what they undertake, to successful issue or to the finish; the surgeon has no business to be frightened off by a few adhesions.

The utmost care and simplicity, the avoidance of all undue manipulation and exposure should be practiced in all intra-peritoneal surgery. The importance cannot be urged too strongly of making every effort to prevent the slightest degree of localized peritonitis. Secondary operations for the

relief of post-operative mischief and pain are always justifiable, and if done thoroughly, are commonly successful. The presence of foreign bodies, huge, silk ligatures, non-absorbable cat-gut, are sources of lasting pain. There are cases occurring only too often where there remains but one course to pursue, but one treatment—re-operation—freeing the omentum, liberating coils of intestine, and removing structures that should have been removed in the primary operation. What is often called successful removal and good recovery, is not always a thorough and perfect operation. If the operation is done for double pyosalpinx, single or double ovarian abscess, it is of vital importance that the whole tube be removed to its very root, that the ovarian abscess be completely enucleated, that nothing should be left of disorganized ovary to suppurate and behave badly, giving rise to an immense amount of surrounding mischief. The adhesions about one or both stumps are responsible for much suffering, and not a few deaths by bowel obstruction. The pain following defective union in ventral hernia is commonly due to adhesions, omental and visceral, about the scar, in fact, they predispose to hernia.

A thorough knowledge of pathology and the natural history of all forms of cystic and hard growths greatly aid the operator in avoiding post-operative sequelæ; enucleation should be practiced and ligatures avoided where possible. No form of cyst should be evacuated and stitched to the parietal opening and drained. He is a timid surgeon who does such imperfect work; he begins work in doubt and ends in disaster. A large number of cystic growths have extensive pelvic adhesions. They are commonly called broad ligament or intra-ligamentary cysts. I do not find them such in my experience; they can be enucleated, freed, and completely removed. A careful study of the physical characteristics of tumors and pelvic inflammatory troubles, and of plains of cleavage, and of the specimen after removal, will give the beginner or the young operator a valuable knowledge of the work before him. Unfortunately, too many operators do not give their specimens, where they succeed

in removing them, that careful study they deserve. There should also be a rapid painstaking inspection before the removal. The exercise of caution in excluding all surrounding viscera, is a wise provision against accidents, complications and possible fatal results. Damage to neighboring organs, or tissue, from faulty application of ligature, can and should be avoided. The use of pure, fine silk in dealing with all adhesions, omental and others, will minimize the risk of all post-operative hæmorrhage, abscess, and adhesions.

The best method of treating adherent cysts and suppurating tubes and ovaries, is by the complete removal of the disease, by enucleation or dissection—practically applicable in nearly every instance. Only in those cases in which the disease affects surrounding structures and bone by invasion do we fail. Fortunately, these instances are rare, notwithstanding the number of neglected and delayed cases.

The tendency at present is toward complete dissection, even to the removal of the uterus with diseased tubes and ovaries. I question the wisdom of removing the uterus in the absence of structural change. The diseased tube can be removed cleanly, leaving the healthy uterus. The importance of the complete removal of diseased tubes is vital. It is just here operators have failed to do their work thoroughly. They leave that which constitutes a source of an immense amount of post-operative mischief. Large, filthy ligatures, silk, or cat-gut, have been placed in unhealthy structures, only a portion of the diseased tube cut away, one-half or an inch of diseased tissue and a dirty sinus or canal is left remaining—a source of infection, adhesion, and abscess, with which the patient continues to suffer. A number of these imperfect operations have to be done over. The clubbed extremity of the tube, the uterus, or both, have to be removed to relieve and cure the patient.

There are operations done in extremity with but one object, that to save life. At a later date it may be necessary to do a complete operation to remove the primary cause and

correct all sequelæ. In illustration :—You are asked to see a woman dying from puerperal peritonitis; her temperature and pulse are high; she is leaking; the symptoms are alarming, those of approaching collapse. You are satisfied, from the woman's distension and other marked symptoms, that there is a general peritonitis. You open and find large quantities of muddy fluid, viscera adherent, flakes of lymph. You free adhesions, irrigate or flush freely, and drain. Your patient recovers speedily. Later it may be necessary to remove diseased ovaries and tubes. Had you attempted to remove the appendages in the first operation, you would have lost your patient; in the second operation you have a good subject for surgery, not a collapsed patient. Such a procedure is quite common in operating for appendicitis. We incise huge abscesses about the head of the cæcum, irrigate and drain. The patient is very ill, and will bear but little surgery, and he who attempts freeing all adhesions and repairing the extensive mischief about the large and small bowel, loses his patient. The same facts hold good in suppurative forms of renal trouble. The wise rule to adopt in many of these cases is first, to save the patient, and later, perfect your surgery in improved and tolerant subjects.

In limited forms of pelvic disease, and suppurative forms of tubal and ovarian disease, about always multiple in nature, it is best to complete the removal at any cost, correcting all complications carefully that they may not recur. I believe with Mr. Tait, and my own experience ratifies his opinion, that it is better to have the patient die on the table than to "leave her with a piece of suppurating cyst in the pelvis." In this class of cases, unfinished or imperfect surgery aggravates the trouble, with which only an attempt is made to deal, and then they are abandoned, leaving the patient to linger on with continuously increasing suffering until relieved by death. It may very properly be claimed that this is a momentous responsibility; it is, but the one word of all others most closely associated with the surgeon's art is the one word, *responsibility*.

No accident or mischief of ignorant, awkward, or mis-

taken surgery should be passed without correction. Often the most careful and skillful method is required to right these mischiefs of bad surgery. Some of them baffle our experience and humble the spirit of our art. The complete freeing of all adhesions, removing all ragged and thickened omentum, will avoid recurrence of adhesions. Adherent bowel once liberated is not prone to recurrence of adhesions, kinks, or obstruction. In all operations done for the relief of pain, whether in general or special surgery, it is important to determine the seat or cause of pain. The post operative pain following the removal of ovaries, diseased or healthy, cannot be in very many instances traced to the operation. This operation, in the first place, is too frequently the outgrowth of a poor surgical guess in a class of subjects, the type of which is furnished us in Adam Bede in the character of Miss Annie Irwine, the Rector's invalid sister. The surgery in these cases receives merited criticism. The cases are many in which the ovaries and tubes are not responsible for the pain from which the patient suffers; and many of these operations are faulty, notwithstanding the operator had few complications to encounter. Many of them are followed by ventral hernia, omental and visceral adhesions, displaced and fixed uterus, making the patient thrice more uncomfortable than she was before the operation. At present no one questions the propriety, the very duty, of removing diseased and disorganized tubes and ovaries; it is thoroughly understood by every advanced student and experienced man in the profession that an occluded tube, distended by water, blood, or pus, with the numerous complications incident to such conditions, always causes suffering—avoidable suffering. It is the operation done when there are no clear and certain indications of the propriety of operation that brings reproach upon surgery. There is too much practice of forms of experimental operation—operations passing under the dulcet designation of "conservative surgery," a very elastic term when used in a surgical sense—always sufficiently ambiguous to leave a hole to crawl through, room for an explanation explanatory of an

explanation explained. Rueful sequelæ often follow what passes under the misnomer "conservative surgery."

We will not further discuss the grievous, reproachful fact that there is very much surgery done that should not be done, and by men without the training, the expert knowledge fitting them for work freighted heavy with responsibility. There can be little question as to the existence of surgical mania; the profound mystery of its varied phenomena is, that it very often attacks men who know the least of the science of surgery—have no aptitude nor deftness in its art.

Surgery can only be rightly and wisely loved for its health-producing, its life-saving possibilities; when other motives prompt and guide the fingers, the issues will fall short of the best. Unfortunately, too many attempt gynæcological work, especially abdominal surgery, without any varied experience or knowledge of general surgery, the extent of whose surgical experience has been the vaccination of a baby. For success the training must be long, persevering, and thorough. The mischievous sequelæ of many operations are due to bungling and inexperienced surgery. There is too much eager impatience among students and a class of practitioners to jump right into the gynæcological field; there is time and room for them, but they should be equipped for their work, and they are entitled to the best lessons of the research and experience of our older surgeons. No one man or set of men own the field or know all connected with it. Abdominal and pelvic surgery is not a game of blind man's buff, though we detect sometimes in those who would practice it something of the spirit and vagrancy of the game "pussy wants a corner."

Post-operative sequelæ may not always be due to the operation; they may, in fact are, in very many instances due to delay of operation. No words of mine would change that rooted opinion of many of the profession, that many women will finally recover even after a long period of suffering, in the relief of which pacific, local or palliative treatment has proven hopelessly abortive. It is difficult to

impress the lesson that the average period of human life is all too short for it to be spent in suffering, and shortened by conditions that can be relieved at a minimum risk. As, with the increasing light of experience, our surgical successes broaden, and have in them yet less of the element of uncertainty, operative procedure will be more promptly resorted to where the indications are clear that it is the one certain, radical and swift way to perfect result. To delays are due a vast number of unhealthy changes in other organs than those directly diseased. Advanced forms of pelvic disease, delayed operations for cystoma and fibroids, favor renal disease. In suppurating forms of pelvic disease the lungs and other organs commonly take up the infection. While the trouble remains strictly local, operations are very simple, safe, and free from troublesome sequelæ. In the early operations—those before the development of mischief in other organs—deaths are exceptional; operations in the delayed cases are followed by hastened death of patients. In many instances, operation will aggravate the trouble—as instance, in lung and renal troubles, arresting the office of what remains of healthy structure.

Fistulæ are commonly due to delay; they occur in neglected cases; the adherent and disorganized bowel is a complication antedating the surgery. The slough and fistula following the removal of a pus tube or an ovarian abscess should not be credited to bad surgery. I have had a large number of fæcal fistulæ; before operating I anticipate them; they nearly always get well; they but very rarely kill. When possible, adherent and disorganized bowel should be freed and carefully repaired; but if the destruction of the sigmoid or lower bowel is extensive, perfect repair is often impossible. Adherent ilium is often overlooked, and is a common cause of obstruction and early death; had the adherent ilium been carefully freed at the time of operation the distension and obstruction would not have followed. I would say here that it is of vital importance that all pelvic and abdominal surgeons should possess accurate knowledge of

bowel surgery; they should study the valuable contributions of Nicholas Senn to our surgical literature.

Beginning the operative procedure, the incision should be the shortest possible for all small growths and reducible ones; the short primary incision is easily closed, and is least likely to predispose to hernia. There is but little or no embarrassment in working through a small incision by the protrusion of viscera. A good number of teachers and authors recommend the long incision for the admission of the whole hand. This, I hold, is an unfortunate error in their teaching; it greatly predisposes to embarrassments, needless exposure, viscera manipulation, traumatism and infection. Through the short incision, all suppurative forms of tubal and ovarian disease can readily be removed; ruptured tubal pregnancy can be dealt with successfully through a two-inch incision; all cystomata, with watery contents, can easily be tapped and delivered through a small incision. It is only necessary in hard and irreducible tumors to make the long incision, and in these cases the abdomen should be early and rapidly closed. Prolonged and free manipulation about the long incision has much to do with non-union, stitch-hole abscesses, omental and intestinal adhesions about the lineal scar. It is exceptional to find adhesions about the short incision in clean and rapid operations. Tight stitches, including too much tissue, are harmful, closure of the abdominal incision should be careful and thorough by every one who attempts abdominal surgery; protrusion of viscera should not be permitted, and is easily avoided while working through a short incision.

Local peritonitis in the region of the wound with consequent adhesions and constriction of the intestine by bands and kinks, are to be guarded against, by avoiding exposure, undue manipulation, and especially avoiding the use of all irritating solutions about the incision. These complications, and others, commonly follow the work of men using a hand basin of some chemical solution. Accidents and wounds to viscera should be carefully repaired. It may happen that a coil of intestine surrounds the pedicle,

and the bowel will thus be rendered impassable. If there is a suspicion of injury to bladder, large or small bowel, it should be carefully looked for—looked for until found, and repaired without delay. I have repeatedly injured viscera in extensive enucleations, and, had I closed the incision without a careful inspection of the injured organ or viscera, I would have lost my patient; but, suspecting the trouble, I sought the lesion and repaired it, and the patient recovered without a hitch in convalescence. We find large numbers of cases crowded with complications of unique interest. Every step in dealing with them is replete with gynaecological lessons, and in these cases every step must be one of caution; the surgery must be clean, painstaking, and skillful; there must be no doubting, wavering, hesitating, or abandoning; the surgery must be swift, certain, and thorough.

Broad, thick pedicles should be carefully covered by peritoneum, to avoid bowel adhesions; the omentum should be always well placed beneath the incision, over viscera, and well down on both sides. This will avoid some of the early adhesions of viscera. Injuries to viscera at cheesy, disorganized points are to be buried and carefully sutured. If the bowel fixation and disorganization is extensive, six, twelve inches, or more, resection or lateral anastomosis should be rapidly made. Greatly thickened or diseased bowel, if not freed of its pelvic adhesions during and after the removal of extensive forms of suppurative, tubal, and ovarian disease, will strongly predispose to bowel obstruction. Here, as in hæmorrhage, I am satisfied that there is often a grave omission—the operator has removed a huge pus tube, or two of them, but has failed to recognize and release the adherent ilium; enormous distension follows, with prolonged and uncontrollable vomiting. If the patient dies, the cause of death is given the convenient name of sepsis or peritonitis. One or the other of these it may be in some cases, but very much more frequently the case is one of bowel obstruction.

Shock and hæmorrhage, and the means of their avoid-

ance, are the important considerations in every case requiring surgical interference; they are the most serious and dangerous accidents in abdominal and pelvic surgery.

Hæmorrhage within the abdomen or pelvis is what hæmorrhage is no place else; it is commonly inaccessible and difficult to control. Every possible caution should be taken early, and observed all through the operation, to secure all vessels, and to carefully tie all pedicles. The application of dry heat, the wise use of strychnia, short anæsthesia, and short operation will commonly preclude shock. I am satisfied that a number of patients are buried on certificates of death from shock, heart clot, etc., when in reality they died of hæmorrhage. Again, hæmorrhage strongly predisposes to tedious convalescence. The Trendelenburg posture will, in a number of cases, be followed by concealed hæmorrhage. In enucleations, in the elevated position, hæmorrhage will scarcely be perceptible, but, after lowering the patient, there is the risk of free and persistent hæmorrhage. In the use of warm irrigation, sponge packing, and a well-placed drainage, we have the safest method of controlling oozing. I would recommend torsion, rather than too free use of ligatures. The use of iron is bad practice. Drainage seems to puzzle the conservative camp; they vibrate between opinions, find it difficult to settle down to a conviction of its value; and with this camp, pain, sinus, and hernia, are equally perplexing.

Fæcal fistula is quite common in neglected cases; they are the dernier resort cases. The matter of early interference in these cases is of the utmost importance, and merits the prompt consideration of all interested. We strongly urge that all such cases be surgically dealt with early rather than late.

It would be impossible within brief limits to more than refer to the many complications we encounter in delayed cases; they make operations difficult, multiply risks, and give us untold anxiety. We have the painful sense when we approach them that we are taking into our hands a human life, clinging feebly to its mortal tenement by few

and frail threads, and that an awkward touch, the slightest error in surgery, will end all. It is, therefore, that we feel that these troubles cannot be pressed home too strongly.

Thousands of our women spend but a semi-invalid existence. Life to such can be only half a pleasure—all because of some physical trouble their physical frames are burdened with. We may not always be able to entirely remove the burden, but we may lighten it and make the patient feel more able to bear it.

ART. III.—Three Cases of Swelling at the Inner Angle of the Eye—Some Remarks Upon the Treatment of Troubles of the Lachrymal Discharge System—A Set of Canaliculus Probes—A Canaliculus Syringe.

By JOHN DUNN, M. A., M. D., of Richmond, Va.,

PROFESSOR OF DISEASES OF EAR, THROAT, AND NOSE, AND ASSOCIATE PROFESSOR OF DISEASES OF EYE, COLLEGE PHYSICIANS AND SURGEONS, RICHMOND, VA., ETC.

Not all swellings at the inner angle of the eye, which occupy apparently the site of the lachrymal sac, result from inflammation of the mucous membrane of this sac. This statement may seem unnecessary, and yet mistakes in diagnosis which lead to a needless slitting of the superior or inferior canaliculus, show that not all practitioners of medicine, nor all oculists, have at all times fully appreciated its importance. Two mistakes, made by myself in my earlier work on the eye, served to impress upon my mind, more deeply than any reading could have done, that "sac troubles" demand more than usual care in diagnosis—more than a general knowledge of the anatomy of the inner angle of the eye.

Before going further, I will state in brief the two cases in which my mistakes occurred.

The first was in a young lady, aged 16, who had, in the inner corner of her eye, apparently contiguous to the upper wall of the sac, a small tumor. The tumor appeared to be slightly movable; the skin over it was not adherent; diagnosis, cyst of some kind. The father, on being asked

about the tumor, said it had been present several years, but until lately there had been no increase in its size; that whenever his daughter had *a bad cold in the head the tumor would become almost purple on its surface*. This last remark made me suspect, although there had never been any obstruction to the flow of tears, that the cyst had, in some way, connection with the lachrymal sac. I, accordingly, slit the upper canaliculus into the sac, and through the upper wall of the sac, opened into the cyst, which proved to be dermoid in character, and had to be dissected out with its capsule in order to obtain a cure.

Case No. 2 occurred in my clinic practice at the Richmond Eye, Ear and Throat Infirmary, and was in a negro man, aged 43. He had a tumor in the inner angle of the eye. It was not painful to the touch; it had made its appearance some months before; it occupied apparently the same position that the lachrymal sac ought to have occupied; there had been no overflow of tears, but when the tumor was pressed upon it emptied itself of a part of its contents, as though pressure caused it to disappear into the lachrymal canal. It was not, however, felt in the nose, which was not examined. The upper canaliculus was slit into the sac, no discharge; the sac wall was slit into the tumor, when a thickish, mucoid apparently half purulent, yet odorless substance, to the amount of about half a teaspoonful, appeared. Pressure upon the opened sac, however, seemed to fail to empty it. A probe passed into it showed that the greater part, if not all, of the orbital plate of the ethmoid had necrosed and softened, was gone, and that the probe went into the remains of the ethmoid cells. The nose was then examined, and the anterior end and lower edge of the middle turbinate were found to completely fill the space between the septum and outer wall of the nose. A piece of the anterior end of the turbinate was removed, when it was found that pressure at the inner angle of the eye would cause a large quantity of matter to exude through the hole thus made. The negro came to the clinic a few times, and then disappeared before treatment applied to the ethmoid had entirely relieved the trouble.

These two cases, with their mistakes, clear enough now, although no harm was done, taught clearly more than one valuable lesson. In no case where there does not exist complete obstruction to the lachrymal discharge—the cana-

liculi being pervious—should slitting of these little canals be resorted to as a primary procedure. Another important lesson is that, in all cases apparently of lachrymal sac inflammation, no matter how clear the diagnosis may seem to be, the nose should be carefully examined, posteriorly and anteriorly, and its condition with equal care noted, inasmuch as the key to the cause of the sac trouble will, in the majority of cases, be found in the nose.

Again, acute inflammation, with resulting abscess of the connective tissue surrounding the sac, may simulate inflammation of the sac itself, giving a picture extremely liable to deceive an eye not trained to question the meaning of the slightest variation from the normal picture presented in acute dacryocystitis with retention.

Mr. S., aged 26, had had fever for several days. His left upper eyelid began to become red and swell, while the pain seemed to localize itself just over the lachrymal sac. In twenty-four hours his eye was closed by the swollen lid, while a hard swelling could be felt in the angle between the eye and nose. Later, this swelling became larger than the lachrymal sac, and extended some distance below the skin. When I saw him, the swelling had become an abscess, and was beginning to point through the skin just over the lachrymal sac. The walls of the abscess could be felt to be hard and thick, covering, if not being, in the sac itself. The inferior canaliculus was probed, afterwards a canaliculus syringe was forced through it into the sac, into which was injected a syringe full of a saturated solution of boracic acid. This could be felt by the patient as it ran out into the nose below. The abscess was, then, not in the sac. The swelling was accordingly opened through the skin, and proved to be a pericystic abscess. In this case, as in the first two mentioned, there had not been an overflow of tears.

Sac troubles do occur, and frequently, and frequently require that the canaliculus should be split. Although this is true, I agree with Gould in thinking that slitting of the canaliculus, with subsequent probing of the lachrymal canal, is far too frequently resorted to. We must, when confronted by a case of obstruction to the lachmyral flow, remember that the canaliculi, the sac, and the duct, are all

lined with mucous membrane, that this membrane is continuous at one extremity with the mucous membrane of the nose; at the other, with that of the eye; that although nature has put many safeguards to prevent, in the lachrymal discharge system, inflammation by extension from the adjoining mucous membrane, still inflammation from this cause is possible; for example, in atrophic catarrh, where the inflammation may extend to the lachrymal canal from the nose, and in certain of the forms of conjunctivitis, when it may extend into the canaliculi. We must remember further, that no matter how well protected from the outer world the lachrymal discharge system is, it is made of living tissue, and may be the seat of inflammatory processes, whose source may not be demonstrable as an antecedent inflammation of either eye or nose, although some affection of either may have furnished the cause of the lachrymal trouble, which may persist after the original trouble has disappeared.

It is not my intention to go into all the causes of lachrymal overflow. I wish here only to emphasize Gould's: "I have contended that in all cases a tentative or palliative treatment should be instituted before destroying the physiological function of the puncta (with their sphincter fibres), and especially before jamming a rigid rod of metal into the inflamed, or, at least, narrowed canal, with its delicate lining of mucous membrane, and thus crushing the latter between the metal and the bony walls of the duct." These words are well worth considering; for when we remember what a large per cent. of those who have had their canaliculus slit, and have been subjected to a long course of probing, have failed to obtain the full relief they desire, we can then appreciate the advantage of a palliative treatment, which often brings a cure, while the severer mode of treatment, *per se*, would have prevented it. And, moreover, the time spent in endeavors to avoid recourse to surgical treatment may produce such amelioration of the condition of the lachrymal mucous membrane as to make the final sur-

gical treatment successful, when, as a primary procedure, the knife and probes would have caused irremediable damage.

The shape of the brow and nose, in relation to the orbit, makes it occasionally more difficult to pass the lachrymal probe through the healthy canal of one person than through the diseased canal of another. Again, the lachrymal canal varies somewhat in size, and also in the angle it makes with the mid plane of the body. These anatomical differences make the passage of the lachrymal probe a procedure requiring some delicacy of manipulation, and *force* is the court of last resort, and very careful must the judges be who send a case before this tribunal.

A case has lately come into my hands which serves to emphasize just here a fact which has been commented on by more than one writer, but has not received the attention it deserves; it is, that sometimes lachrymal obstruction is due to syphilitic inflammation, and may be relieved by general rather than local treatment.

Mr. X. came to me to have removed from the lachrymal canal a silver canula, which some months before had been put into the canal after the inferior canaliculus had been slit. At first, Mr. X. was accustomed to raise the canula, which had only a very short flange, by using his finger-nail. Of late, however, he had "not been able to find the canula." On examination of the inner angle of the eye, I found that the upper canaliculus was open and normal in size; the lower canaliculus had been slit a portion of its length; the knife used must then have slipped and have been forced into the lachrymal sac beneath the caruncle. I endeavored to probe the inferior canaliculus, and found it to be pervious for only a few millimetres, the slit portion. Beyond this it was impossible to find this little canal. Of the canula nothing was to be seen. "But it is in there, and I can blow through it." "Let's see you." Closing the entrances to the nostrils, Mr. X. filled his nose with air, which could be plainly heard to come from the neighborhood of the inner canthus, while the bubbling mucous showed the opening into the sac to be between the caruncle and the inner angle of the eye. Further examination revealed, to the inner side of the caruncle, a sinus, not more than one

mm. in diameter, leading into the sac. Through this sinus could be felt with a probe the canula, which was well down in the lachrymal canal; so far, indeed, that the external opening had closed over it.

The point of this case is this: The lachrymal obstruction had come on when he was in his twenties, yet without acute inflammation of the sac. It is not improbable, judging from the condition of the inferior canaliculus, that this was impervious, and that this fact, together with an irritable condition of the conjunctiva, had been the cause of the lachrymal overflow. (I have seen more than one eye where the upper canaliculus was sufficient to carry off the lachrymal discharge, the lower canaliculus having been obliterated.) Had an uninflamed canaliculus been slit it is not likely that it would have closed so completely as this one did—that is, become obliterated. The cause of its having been impervious I judge to be syphilitic inflammation, there being in the mucous membrane of the mouth evidences of this disease—*e. g.*, those thickened anæmic areas, which are seen from time to time on the uvula of syphilitics. I may be mistaken in this, as I did not see the case until he came to me for removal of the canula; but the history makes me think we had here to do with one of those cases where syphilitic deposit was the cause of the lachrymal obstruction. And even if I should be mistaken in the cause of obstruction in this case, the case will serve to bring to mind that syphilis may be a cause and one removable by internal medication without resort to surgical means. Again, cases of syphilitic stricture of the canal, or canaliculus, can also exist where medicine is powerless.

Even severe cases of purulent dacryocystitis do not always require slitting of the canaliculus. With patience these may be treated, in many cases satisfactorily, without the knife. In all cases of lachrymal obstruction, it is our duty to first inform ourselves whether the canaliculi are pervious, and whether they open into the sac; remembering that the inflammatory products may be so placed as to occlude the lower, while the upper canaliculus remains per-

vious, or *vice versa*. We must remember, too, that the diameter of the punctum is smaller than the diameter of the canaliculus, and, moreover, that nowadays we have no right to attempt to probe a canaliculus without having first instilled into the corner of the eye a solution of cocaine.

For deciding whether the canaliculi are free, I much prefer the use of a short probe to a long one; of a straight, inflexible probe to a curved, flexible one; of one tapering gradually for some little distance from the point to one of the same diameter throughout its whole length. These little things are, of course, merely matters of preference.

A set of canaliculus probes made for me by Messrs. Bartlett, Garvens & Co., of this city, answers my purposes very well.* They are small, and are made after the pattern of ordinary sewing-needles, of three different sizes, their points being rounded. The smallest probe has a diameter of slightly less than $\frac{1}{2}$ mm. throughout. The middle probe has a diameter of $\frac{1}{2}$ mm. at point, and increases gradually to $\frac{3}{4}$ mm.; the largest from $\frac{1}{2}$ mm. at point to 1 mm.

In passing a probe through either canaliculus, we must bear well in mind that our object is not to injure the wall of this little canal by making a false passage. The operation is simple enough, requiring a little patience and the use of some judgment to decide whether or not it is safe to continue to push forward the probe, whose point we have made to enter the puncture. It is well to begin with the middle-sized probe, whose point will enter, in most cases, the puncture without trouble. Should there be any obstruction to its passage we may then try the smallest probe.

In the use of these probes, I must repeat, care must be taken not to make a false passage. They are small, and are, to a certain extent, pointed; with, however, the exercise of a little care, no harm will ever be done the wall of the canaliculus by their use. We must, however, advance them, when once in the puncture, slowly along the wall of the

* Messrs. Bartlett, Garvens & Co., surgical instrument makers and dealers, of Richmond, Va., will have cuts of these probes and syringes in December number of this journal.

canaliculus. The use of the largest probe I have reserved for exceptional cases. While the point of the middle-sized probe will enter the puncture, its largest diameter is somewhat greater than that of the puncture, so that its use necessarily stretches the puncture enough to admit with ease the point of the canaliculus syringe, but not enough to do any permanent damage.

In regard to the advantages, as they seem to me, of these needle probes for use in the canaliculus, a few further words may be said. The two smaller sizes are smaller than any probe with which I am acquainted used for this purpose. The tapering point prevents the mucous membrane, whether inflamed or not, from massing before it in its passage and so blocking the way; they can thus find and continue along the route of the canaliculus when a blunt-pointed probe would stop or bruise the mucous membrane. They are short, and were purposely so made, inasmuch as it is more difficult to accurately determine the amount of resistance offered to the point of a long than a short probe. And this inability to decide whether or not I was using undue force when endeavoring to probe the canaliculus, has caused me to discard both Bowman's probes and director when I wished merely to determine whether the canaliculi are free.

When both canaliculi have been found to be free, and it is desirable to know about the lachrymal canal without passing a lachrymal probe (either with or without slitting a canaliculus), use is made of the canaliculus syringe. For this purpose the barrel of an ordinary hypodermic syringe is used; to this is attached a canula, in diameter the same as the middle-sized needle probe, and can be made by filing off the end of a hypodermic needle. Messrs. Bartlett, Garvens & Co, have these canaliculus canulæ in stock. This canula is inserted into the puncture, which, if necessary, has been previously dilated with the middle, in certain cases with the large-sized needle probe, and then is forced carefully along the canaliculus until the end projects into the lachrymal sac, when the contents of the syringe are forced into the sac. If the lachrymal canal be free, the patient

will feel the fluid from the syringe in the nose. A saturated solution of boracic acid is a suitable fluid to use for this purpose.

There are several kinds of canaliculus canulæ to be found at the instrument stores, among them Anel's, Knapp's, etc. My preference is for the blunt hypodermic needle, which is long enough to reach into the lachrymal sac, which, in turn, I consider to be a distinct advantage over these canaliculus canulæ, which are made only to enter the puncture.

I have given no suggestions as to the character of the tentative treatment to be pursued in cases of lachrymal obstruction. This would require more space than I wish to give to these remarks. Gould's suggestion of filling the inner corner of the eye with an astringent, antiseptic solution, and of making the lachrymal discharge system wash itself, is a good one. The patient can carry out this treatment himself; and therein lies its chief advantage. When in the office, I think the direct washing of the sac through a canaliculus syringe a better procedure, the canula being left in the canaliculus, while the barrel is detached and refilled as often as deemed necessary. The solution to be used must vary with the case to be treated. Generally speaking, a saturated solution of boracic acid is an excellent wash for this purpose.

In closing these somewhat scattering remarks about the lachrymal discharge system, I wish to say they have as their purpose to emphasize Gould's remarks about the value of well-directed patience in the treatment of troubles of lachrymal discharge system. Knowledge of the gross and minute anatomy of the sac and its region is of first importance. Secondly, comes knowledge of the pathological possibilities of these tissues. Astride both of these sits that knowledge which experience brings, and without this rider—well, our patient will, as the result of our efforts, unless chance take a hand, have always for joys and sorrows alike a weeping eye.

In regard to the needle probes, no claims are made that

they are anything new ; they have been mentioned at some length only because they have answered in my hands purposes which no other probes have answered as well.

ART. IV.—The Duty of the Present to Future Generations from a Reproductive Standpoint.*

By J. M. MASTERS, M. D., of Knoxville, Tenn.,

PROFESSOR OF OPHTHALMOLOGY, OTOLGY AND LARYNGOLOGY IN TENNESSEE MEDICAL COLLEGE, ETC.

It is a trite saying that all kinds of people are required to make a world. It is true we find in the world every imaginable kind of human beings, but fewer of some kinds would unquestionably make a better world. Fewer doctors, perhaps, would hasten this desired result.

In discussing a question of such universal importance, fraught with moral principles and so intimately associated with the religions of the world, one is profoundly impressed with the wonder and meaning of his own existence, and is filled with intense apprehension for that of generations yet unborn. Only he who has carefully studied human existence, from its highest to its lowest state, is prepared to realize the responsibility of exercising the function of reproduction.

We desire to divest this subject of sentimentality, and conscientiously study it from a humane and practical ground. We hope that in some degree we comprehend the sacredness of those functions of the human body intended by the Creator for the perpetuation of the race. That the exercise of these natural endowments, under proper conditions, should not be prevented is beyond dispute.

But the duty of the present to the future does not alone exist in the propagation of great numbers. While none are perfect, physically or morally, many are so deficient that, to

* Address of the President before the East Tennessee Medical Society, September 28th, 1893.

transmit their imperfections to posterity, would be inflicting a positive evil on ages yet to come.

The faculty of reproduction, in order to accomplish its ultimate design for good, must not be perverted or abused. The pleasure of administering to many of the physiological functions of the body leads to excessive indulgence, the effects of which, if not prevented, would result in harm.

While it may give rise to much ethical discussion, we believe that so long as the will of man is incapable of subjugating his appetites and passions, and restricting his gratification to right limits, and so long as the union of mental and physical invalids is sanctioned and solemnized by the church, will it be eminently proper to innocently prevent the sins of contracting parties from being visited upon posterity.

Love, the divine attribute of the soul, when guided by judgment, leads to the throne of supreme happiness; but too often is judgment usurped by fickle sentiment, reason dethroned, and conjugal relations accepted amid environments that drag down to suffering, misery, and degradation—an unholy perversion of created energies, which, if uninterrupted, will be repeated through endless cycles.

If individuals who do not measure up to the physical, mental and moral standard of perfection which would justify them in assuming parentage, and such persons feel that life will be shorn of its happiness without marital relations, then, as a duty to the world, enforced sterility should become an obligation of their union. No greater sin can be committed by men and women than knowingly bring forth children stamped with disease and vice that will render life obnoxious and miserable and eternity a hell. No human law, no creed, no religious rite, can dare invite the curse of Almighty God and nature's laws by uniting, in legal and sacred ties, the polluted and vicious of earth. To bring forth a posterity, whose heritage is disease and whose life is corruption and sin, is sin intensified.

How devoid of appreciation of his high calling is the preacher who knowingly solemnizes the marriage vows, the

inevitable progeny of which will be moral debauches, physical wrecks, and mental imbeciles! As the human family multiplies and the conditions of civilization change, the fierce conflict for existence increases. The theory of "the survival of the fittest" impels every conscientious person to seriously reflect upon what is to be the lot of the immediate offspring. Shall they be brought forth with sound bodies and minds, under conditions that will enable them to successfully contend in the struggle of life, and add their portion to the common weal of mankind? Or shall they inherit weaknesses that will trammel their lives until they will be crushed out by the might of their more powerful fellow-creatures?

With the full knowledge of the restricted charity of the world, many falter in contemplation of the suffering to which their offspring may be subjected. The felicity which should be the culmination of the marital relation is blighted by these overwhelming fears.

The prerequisites of every man and woman, desirous of conferring upon the world a progeny, should be a healthy, well-developed body, a sound mind, and pure moral sensibilities. We are as fully convinced that immoral and diseased conception should be prevented as that unholy or filthy connections should be prohibited. The eradication of the degradation, want and suffering, the indescribable misery and resulting crime of the world where beastly lust knows no restraint, and millions are conceived in sin and born in iniquity, may find a more rational and practical solution than has ever been promulgated through the humane and scientific prevention of the propagation of sickly, vicious, and virtueless beings.

It is not to be inferred that we are advocating the doctrine of universal enforced sterility; on the contrary, under proper conditions of health and circumstances of the contracting parties, we are an advocate of large families.

Nevertheless, conditions are many which make the wisdom of rightly limiting the number of descendants wholly defensible. The fervent love which fills the breast of every

true mother for her child leads her to thoughtfully reflect upon her surroundings and her ability to properly fit for the duties of life her progeny.

These are matters not only worthy the consideration, but the duty of every parent to carefully study. While poverty alone should not stand as a barrier to happy marriage and the rearing of useful families, yet we believe that thoughtful judgment should be exercised, that more concentrated attention may be bestowed to better equip for life limited numbers, where justice could not be done to more.

I wish here to state clearly that when, from physical or other justifiable reasons, the prevention of increase becomes a matter of candid and serious consideration, means for avoiding conception—not its destruction—are alone to be entertained.

There are those who regard the bearing of children in the light of an evil burden; and unmindful of the physical and moral consequences of interrupting the physiological processes of nature, seek means for destroying the fruits of conception. It is to be deplored that any viciously extinguish their offspring, but that such too frequently occurs cannot be disputed. We have no language to adequately express our condemnation of such practices.

The transmission from parent to child of disease and physical and mental characteristics is so well known as to need no discussion. The knowledge of physical peculiarities resulting from mental impressions received by the female during the period of gestation was known as early as the time of Jacob, and the old patriarch took advantage of this fact to secure from his uncle, Laban, the offspring of all the strong, healthy cattle of the herd and of his flocks of sheep and goats. He entered into a contract with his uncle, Laban, to feed his flock for all the increase of the herd that were ring-streaked and spotted, and all the brown and solid colors should be Laban's. So Jacob gathered green poplar, hazel and chestnut sprouts (when the sap was up, I suppose), and peeled rings, streaks and spots on the sticks. And when the strongest and best developed of the

herd came to drink, he would place these streaked sticks in the trough, and the mental impression thus induced caused ring-streaked and spotted calves. When the feeble old cows came up to drink, Jacob would remove his peeled sticks, and from these nothing but sickly tans and fast blacks were born. The result was that pretty soon Jacob had all the Shorthorns, Holsteins, Southdowns, menservants, maidservants, and asses, and old Laban a few old brindle mules and a lame jenny. Jacob, no doubt, played this trick on his uncle for fooling him with Leah after he had worked seven years to obtain Rachel for a wife.

No scriptural truth is more forcibly demonstrated than that the sins of the parent shall be visited on the children, even to the third and fourth generation. This is not only manifested in physical defects, but is equally true and as plainly seen in moral and mental qualities. If, by voluntary consent or legal enactments, proper regard for these immutable laws of nature was observed, how wonderful and with what rapidity would be the physical, mental and moral improvement of the human family! Is there not in this theme food for profound thought, and may it not be the true gospel of nature's evolution that in the end shall free the world of disease and vice?

Is there not more for the science of medicine to *learn* and *teach* and *do* than searching for microbes and administering antitoxines? Can we not inculcate the truth that man's body is as sacred as his soul? That the one being diseased, the other is dwarfed; one weak, the other is prostrated; one cursed, the other is damned?

Quarantine and sanitation are laudable protections to the present; but the duty of the present to future generations is to evolutionize the race away from disease, out of pollution and above sin. Does not the intelligence of man owe more to man than to the brute? Yet incomparably greater is the time and thought and care bestowed on the selection, improvement and perfecting the inferior order of animals than is given to better the condition of him who was created in God's own image? Let the evolution of the human

family be directed by reason, untrammelled by superstition and drivelling sentiment; let every vital force conform to the perfect laws of God, and the degree of perfection in body and intellect to which not very remote future generations would attain, would astonish, delight and bless the world.

The application of specific measures to regulate evils to which we have hinted, will require much thought and time. More than has ever yet been done can be accomplished by educating the masses upon these subjects, and this instruction must largely emanate from the medical profession. The opportunities of the intelligent and conscientious physician to inform the laity upon facts of such importance to the present and far-reaching benefit to the future, are many, and should be improved. The ministry cannot shirk its duty upon these things. Cleanliness of body must accompany purity of soul.

As to legal enactments for curtailing the evils imposed by preceding upon subsequent generations, we shall not discuss. However, reason would suggest that among the incurably diseased and the low vicious classes, enforced separation of the sexes is asexualization—is justifiable. The latter procedure would be cheaper and more effectual, as the safeguard could not be abrogated by the pardoning power of executives.

We trust that this brief paper may awaken new thoughts and higher appreciation of the marital relation and a fuller realization of parental obligations. The raising of children is fraught with great responsibilities, and should not be entered into indiscreetly. It is a subject which should exercise the most careful thought and profound judgment. Conception should result by the consent and wish of both husband and wife. It should not be the result of accident or occur against the protest of either party. Parental impressions are unmistakably transmitted to off-spring, just as physical characteristics of perfection or deficiency are imparted to the child; so also, are mental qualities and tendencies. Mental goodness can be cultivated and trans-

mitted as surely as intellectual strength and capacity. The extent to which the minds of those beings brought forth against the approbation of their ancestors may be impressed with evil qualities, cannot be known. How sacred then is the enceinte state! How great its responsibilities! How wrong it should be thoughtlessly assumed!

The time will come in the history of the world when enlightened judgment and affectionate wisdom shall prevail over blind sentiment; when humane laws will say that *disease* shall not be wedded to *health*; that *misery* and *vice* shall cease to propagate.

ART. V.—**A Case of Senile Gangrene Treated by Amputation.—Remarks.***

By G. W. H. KEMPER, M. D., of Muncie, Indiana.

Mr. A. W. C., farmer, native of Ohio, aged 73 years. In 1883, an attack of rheumatism began and continued for about one year—nine months of the time being confined to his bed. Although never very strong, yet he had led an active, stirring life. He had been a moderate drinker of alcoholic liquors.

In the early part of 1891, he began to experience some pain in the left leg and foot. By the first of June, the pain was quite severe and accompanied with a sensation of chilliness. The pain gradually increased, and was described as stinging. He became quite a sufferer. After the first of September, he was removed from his home in Ohio to the residence of a daughter in Yorktown, near Muncie, and came under the professional care of Dr. Shively, of the former place. At the time he arrived there, the pain was so severe as to require the aid of anodynes at frequent intervals.

About the 6th of September, a small black spot appeared on the third toe of the left foot, and soon extended over the entire toe. At the same time, the dorsum of foot in the metatarsal region became reddened.

I first saw him on the 13th day of September, at which

* Read before the Mississippi Valley Medical Association, October, 1893.

time the third toe was completely gangrenous. He was suffering a great deal of pain in the affected foot. It was evident that the arteries of the extremities were more or less atheromatous. His condition gradually and constantly grew worse, and the quantity of opiates had to be increased in order to secure rest. Several circumscribed spots appeared over the leg, and his general condition was not reassuring. The propriety of an amputation was discussed, and its chances were explained to the patient and his children. He decided to undergo amputation of the leg. I may add that an analysis of the urine showed nothing abnormal.

On the 28th of September, the gangrene had extended over the second and third toes, and two inches upon the dorsum of the foot, and a well marked line of demarcation was formed. The pulse was 92; temperature 100.5°. The discoloration on the leg had disappeared, and the skin appeared healthy.

At this date, assisted by Drs. Shively, Shields, Cowing, and Coffin, I amputated the leg through the middle third, by the flap method. Proper antiseptic precautions were observed; ether used as the anæsthetic. Upon making the section, it was found that all the arteries were completely calcified, and not one was ligated. Two veins permitted more blood to escape than was desirable, and these were tied.

The operation was almost a bloodless one, and he soon rallied. He suffered considerable pain during the first twenty-four hours after the operation, but never afterward except at dressings of the stump. He was supported by stimulants and a generous diet.

The highest temperature reached was October 1st, when the thermometer registered 104° F. He exhibited considerable delirium for a few days after the operation, and quite often somnolency was so profoundly marked that it required some effort to arouse him. He manifested quite a tendency to the Cheyne-Stokes respiration.

On the 3rd of October, about a tablespoonful of grumous pus escaped. From this time, sloughing of the upper flap began, and continued until the tibia was exposed for a length of two inches. This portion of bone was soon denuded of its periosteum.

About one month after the amputation, the patient was seen by Dr. Marsee, of Indianapolis, and, at his suggestion, we placed the stump in a tin splint, which contributed a great deal toward the immobility of the tissues and aided granulation. The exposed bone gradually exfoliated, and dur-

ing the months of December and January, was entirely separated. The soft tissues continued to throw out healthy granulations, which slowly but gradually covered the extremity of the bone, and finally closed over with healthy skin, leaving a smooth and well formed stump.

I saw the patient on the 17th of May, 1892, and found the stump in an excellent condition. The circulation in the remaining foot and leg appeared to have improved since the removal of the diseased member. He was in an excellent state of health, but disposed to remain in the recumbent posture much of the time, because, as he remarked, "He had lain in bed so long, that when he got up, he ached and felt sore."

I have presented this case because of its clinical interest. A few points might be considered in connection with its study. The gangrene was due to the atheromatous degeneration of the arteries. The supply of blood to the extremity became less as the lumen of the arteries decreased by accumulated deposits upon their walls. Finally, this supply was insufficient to nourish the extreme parts, and death necessarily followed. It was not associated with diabetes, as many of these cases are.

Was amputation justifiable? I think the result of the case, although slow in process of healing, is a sufficient answer. While I am of the opinion that surgical measures were proper, I am inclined to think that we erred in not selecting a higher point of election for amputation. The red spots that were present on the leg early in the history of the disease, although absent at the time of the operation, indicated a low vitality of tissues unfitted for an amputation.

Since I encountered this case, I have taken some pains to investigate the subject, and note the observations of those who have had a more extended experience, and I feel that my researches may aid others; hence I record them in connection with my solitary case.

Mr. Jonathan Hutchison was one of the first operators to call attention to the great value of high operations in senile gangrene.* He gives credit for earlier commendations of the operation to James.

**Medico-Chirurg. Trans.*, vol. 67 (1884).

The same month in which I operated—September, 1891—Heidenhain, of Germany, published a valuable paper based on twenty-five cases he had seen in the clinic of Küster at the Augusta Hospital in Berlin.* These twenty-five patients underwent thirty primary amputations; three requiring double, and one a triple amputation. In ten of the subjects, gangrene of the stump followed, and secondary amputation was performed.

In a recent article,† Dr. Charles A. Powers has made an excellent summing up of these cases, and I quote his words:

"Analyzing these cases, we find that four times, in circumscribed gangrene of a toe, Küster disarticulated, but that in every instance, gangrene of the flaps occurred and extended to the foot. Lisfranc's amputation was secondarily carried out on one of these patients; he developed further gangrene and died of sepsis. A second was further amputated at the knee and again higher, the latter operation accomplishing cure. Both of the others were healed only after amputation through the femur. In three cases of primary amputation through Chopart's joint, the gangrene progressed in two, and required femoral amputation. Primary amputation through the leg was employed six times; one case died from gangrene of the flaps and sepsis; three were saved by amputation through the thigh; the other two were healed only after gangrene of the edges of the flaps and necrosis of the sawn surface of the bones. Of these thirteen low primary amputations, only two went on to healing, these in leg amputations; two patients died of gangrene of the flaps and sepsis; the remaining nine were saved by secondary amputation at or above the knee.

"Of the seventeen primary amputations through or above the knee-joint, nine were cured, while eight died of diabetic coma or heart weakness. Of the ten secondary amputations, all recovered. Separating now the diabetic from the non-diabetic cases, we find that of the eleven diabetic patients, six were cured, while five died; and of the fourteen patients with simple senile gangrene, nine were cured, five dying. The fatal result was due to gangrene of the flaps and sepsis in two cases (one Lisfranc's amputation, one through the leg, both in the early days of antisepsis); in one case a man, aged eighty years, died at the end of nine days from heart

**Deutsche Medicinische Wochenschrift*. 1891.

†*Amer. Jour. Med. Sciences*, Nov., 1892.

failure; one man, aged seventy-eight years, succumbed to hypostatic pneumonia; and another, aged fifty-two years, died at the end of nine days with myocarditis, nephritis, and ascites. The list shows that through the high amputation, all patients were saved who were not severely afflicted with some general disease."

In conclusion, I offer the following deductions:

1. While the gangrene is confined to one or two toes, it is best to defer amputation. If the disease extends to the dorsum of the foot, amputation is proper.

2. Amputation below the knee is rarely successful, owing to lack of proper blood supply and tendency to recurrence of gangrene in the stump.

3. Amputation through the thigh will save a large per cent. of the cases, and especially so, when the subjects are free from a general disease. Mansell-Moullin observes that usually the thigh is small and wasted in the lower third; the artery is sound in Hunter's canal; the flaps are well supplied with blood; and old people, as a rule, resent operation very slightly; their tissues are not prone to inflammation.

4. When amputation has been performed below the knee, and gangrene appears in the stump, unless the patient is greatly exhausted, it will be proper to perform a secondary amputation above the knee.

ART. VI.—Treatment of Sclerosis of the Spine.*

By EPHRAIM CUTTER, M. D., of New York.

PROFESSOR OF CLINICAL MORPHOLOGY AND APPLIED MEDICINE, COLLEGE PHYSICIANS AND SURGEONS, BOSTON.

This pathological lesion of the spinal cord has been so fully set forth that there is no need of any more definition than that it is a thickening or solidifying of the interstitial substance, which one late authority depicts as absolutely black, white being used as the color of the normal tissues of the cord.

*Read before the Mississippi Valley Medical Association in Session in Indianapolis, October, 1893.

The writer thinks the presentations as to sclerosis have been incomplete, insomuch as he has not seen what he regards as the proper treatment, substantiated by a second witness (the writer is a second witness)—treatment that shows sclerosis to be not incurable—while patients with sclerosis are abundant everywhere, and ought to have the benefit of the best ideas in relation to their disease.

(A). *Spinal Sclerosis* is an organic disease; a lesion of structure, a degraded tissue usurping the place of normal tissue. The fibrous sheaths of the nerve fibres are thickened so as to form the hardening or sclerosis, and to produce the paralysis called locomotor ataxia.

Thickening of the fibrous nerve sheaths in any part of the body, pinches the contained nerve, and produces more or less paralysis, numbness and pain (for pain is the expression of a partial paralysis). You may smite with a birch switch and cause pain, or smite with a steel bar and produce numbness. In both there is paralysis but differing in degree.

(B). It is a disease of nutrition. The law of the body systemic whereby normal tissue is removed and replaced continually, is violated. From weakened innervation, normal nerve tissue is replaced by connective fibrous tissue. The weakened innervation comes from deficient supply of vital force; hence the partial paralysis. Partial paralysis may also come from blows, wounds, contusions, or from the gases of fermenting food in large excess and long continued in the alimentary canal, as I have been taught and believe. There is no doubt of the effect of traumatism. There may be doubt as to food producing paralysis by fermentation products in the alimentary canal. It is the aim to dissipate those doubts farther on.

(C). Some may insist that the diagnosis must be verified by autopsies. Veterinarians have the advantage over physicians. Under Government authority, they can kill and make autopsies; but we must treat the human cases that have the symptoms of sclerosis, and that too without autopsical diagnosis! If such cases are relieved and cured, we

must class them as sclerosis, or give up the practice of medicine. Common sense and common law command such a course. Indeed it is daily history. Seeing then that sclerosis must be treated, it is advised—

(D). To give food to improve the nutrition, so that abnormal fibrous tissue deposited, should be replaced by normal nerve and fibrous tissue in proper proportion, such as nature will deposit if she has the materials and force.

(E). Food must be stopped which has acted as causal. Sydenham lays down the principle that nature cures disease if she has time and means enough. In other words, that she will remove abnormally deposited tissues and replace them with normal. It is, too, generally thought that abnormal tissues do not change as the normal tissues do. For example, that a fibrous tumor has not the same law of interstitial change that muscular has in health. Fibroids may not change as quickly, but when you see fibroids, as I have, as large as a man's fist, entirely disappear within a month, it would seem that this interstitial change was more rapid than in the normal changes of the body. The old idea was, that it takes seven years for the whole body to be renewed by nutrition. As the friable and chalky condition of teeth has been given place to normal firm, fibrous texture in the space of three months' time, it is possible that Sir Lionel Playfair's estimate of seven months is more correct than the popular one of seven years. Such food can be had as will need the minimum of power to digest, and give the maximum of vital force after digestion, besides being lived on as a general rule; when properly prepared, indefinitely. I have had cases of sclerosis of the spine recover under such diet treatment. One case was told by medical authority after cure, that it could not be believed that he was the same man.

Let us proceed on to the causal food of sclerosis, and afterwards recur to the treatment, as perhaps the matter will be better understood.

To stop causes is the first and most important step to prevent results. Let causes be not removed, and no matter

how much is done, results continue. If a certain food makes one sick, the best way to make well, is to stop that food. These axioms would not be repeated here were it not that medical men seem oblivious of them as to patient and physician. Patients will cheerfully submit to amputation, when they will not cut off food they like to eat. Physicians feeling the extreme difficulty of dieting patients, will give up the main question and do the best they can, gyrating about the central trouble, in place of hitting the nail on the head, and of doing away with the prime evil at once, and at the outset. Hence comes the idea of the incurability of sclerosis.

Evidence that Sclerosis Comes from the Starchy and Sugary Foods in Excess and in Inactivity.

This is an American idea set forth in the Relation of Alimentation and Disease, by J. H. Salisbury, LL. D., New York. J. H. Vail. 1888. The author hired men and purchased swine and fed them on starchy and sugary food exclusively. No one has set these experiments aside by a repetition and getting different results. Until then, they must stand as authority.

There is not time to give but a few instances. Six strong healthy men on baked beans and coffee, continued for eighteen days. By the eighth day, all were dizzy, and by the fourteenth day, feet of all prickled. All numb but one, who felt intoxicated. By the eighteenth day, all had feet-drag in walking, but one who walked with feet and legs numb. The symptoms of locomotor ataxy were so marked on the eleventh day that none of the six could walk without support. All wobbled and dragged their legs, not being able to lift the feet from the floor. (*Loc. cit.*, pages 185-6-7.) All lost each from 19 to 29 pounds by weight in nineteen days diet. But in four days of meat diet they all lost the symptoms of sclerosis, and were well. In this connection, it may be said that alcoholism is a species of acute sclerosis. May not the spine be hardened by alcohol in drunkards temporarily? The late Dr. Adino B. Hall, of Boston, told

me that he once bled a drunkard and saw the alcohol burn in the blood withdrawn. It is quite certain that in these baked beans diet people alcohol was found in the alimentary canal, made by the fermentation of the bean starch. The bowels of all were bloated badly at once. All were constipated, and had colic from the paralyzing influence of the carbonic acid gas. All had diarrhœa. Indeed, all the cases looked as if poisoned by alcoholic and carbonic dioxide. The speedy recovery was due to the period being too short for organic lesions, save the supposed ones from alcohol.

Swine.—(*Loco citato.*) The author bought $624+404=1028$ swine, and fed them on distillery slop. In ten to fifteen days, they began to reel in hind parts; afterwards, gradual weakening in the limbs, labored breathing on moderate exercise, staggering, and often a dragging of hind legs.

In the fatal cases, which occurred in two months, all control was lost over the hind parts, and often they were unable to walk or stand without support. Out of 104 autopsies, 82 were found with thickened intestines due to the extravagant development of the fibrous tissues. It is a matter of regret that the spinal cords were not examined as to sclerosis; but for our purpose, until some one upsets these reports by others made in like circumstances, I see no other way than to accept them, and receive them as evidence that the fermentation of starchy and sugary food does produce sclerosis of fibrous thickening in the spinal cord. Indeed, I have acted on it, and had good results in my cases.

Treatment.—Knowing what I do, I should be recreant to duty if I had not followed, in my cases, the treatment foreshadowed in the baked bean experiments called the "Salisbury plans," which have been freely made known clearly, as to detail of cause and cure, in the work cited, for five years. I have found the diagnosis greatly helped by the morphological examinations of the blood, by eliminating rheumatism as a cause for the severe pains which complicated.

Mr. ———, age 26, locomoting, carried his head so that it lay almost on his right shoulder. His body, when erect, was a torso, and the spine was twisted so that the right arm hung down nearly to the ankle. Unassisted locomotion was impossible at the outset of treatment. Pains in neck, head and limbs severe most of the time. When stripped and laid flat on back, or hung with a yoke from above, the body was straight. When he journeyed, he had to recline. He was kept for a year on a pint of hot water one hour before meals and on going to bed; beef, chopped so as to remove the white fibrous tissue (which ferments), broiled rare, not raw, seasoned while hot, with butter, pepper, and salt. Celery, horse-radish as a relish. No other food allowed. After a year, he was allowed some wheat bread or potato in the proportion of one part by bulk to two of meat. This was increased by adding the whites of eggs, tea and coffee. The result is that he can walk upright, is free from pain, and is an astonishment to the medical gentlemen who knew him at the first of his illness. Simple tonics, with some simple digestive, as glycerined pepsin of Fairchild, were given as aids. A close watch was kept on the secretions to ensure their normality, and to see to it that the patient did not eat forbidden things.

The principle is to get rid of fermenting food, live on foods that do not have the alcoholic fermentation, oil the machine with medicines to make it run more smoothly, and nature will cure almost any lesion of nutrition if time enough is given. The profession do not properly appreciate the terrible effects of gas in excess in the alimentary canal. Those who doubt are respectfully requested not to dispute, but to live on baked beans and coffee *alone*, for twenty days, and *then* criticise this paper.

In prescribing the products of Manufacturing Pharmacists, we should be guided to a great extent by the business standing of the manufacturers. No other house in the South or West has a better reputation for strict integrity than the firm of R. A. Robinson & Co., Louisville, Ky. We do not hesitate to recommend the preparations advertised by them on page 28 of this issue.

ART. VII.—(I) Polio-Myelitis; (II) Chorea; and (III) Arthritis Affecting the Right Sacro-Iliac Joint and the Intervertebral Substance in the Lumbo-Sacral Region of the Spine (Probably Rheumatic).*

By J. T. ESKRIDGE, M. D., of Denver, Col.,

PROFESSOR OF NERVOUS AND MENTAL DISEASES IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF COLORADO; NEUROLOGIST TO THE ARAPAHOE COUNTY, TO THE ST. LUKE'S, AND TO THE DEACONESS HOME HOSPITALS.

Gentlemen,—I shall bring before you to-day, first, the man whose case we studied last Saturday. The case is one of *polio-myelitis*, localized between the sixth cervical and first dorsal segments of the cord on the right side, involving, to the greatest extent, the shoulder and upper arm-muscles, especially the deltoid, biceps, and triceps. I told you last week that if the muscular wasting and diminution of electric irritability steadily progressed, the prognosis would not be nearly so favorable as it would if they did not progress further. This week he can move the deltoid muscle, which he was unable to do last week. He now can carry the index of the dynamometer up to fifty. Last week he was unable to move it at all. There has apparently been no muscular wasting during the week; so we have a distinct improvement, and probably the muscles will soon gain a fair amount of power, and he will be able to leave the hospital in four or five weeks. More depends, in the ultimate prognosis of a case of *polio-myelitis*, upon the character of the response of the muscles to electricity than upon anything else. This patient was discharged at the end of six weeks from the time he entered the hospital, and was able at that time to resume work.

CASE II.—The *second case* which we will study to-day will be that of the little patient before us. Her name is Rose K., æt. 14, Austria. So far as she knows, although she does not seem very conversant with her family history, there is nothing of importance in it. I can neither find history of diseases of the nervous system nor of the lungs. She states that she came to this country in 1886, and was in perfect health until one year ago. She never began to menstruate until September of this year. One year ago, the right side of the jaw began swelling, and the swelling extended over the right side of her body. This continued for six months.

*A Clinical Lecture delivered at the Arapahoe County Hospital, Stenographically Reported and Revised by Author.

The swelling and pain were limited to the right side of the body, especially the arm, hip, and leg, down to the knee. She states now that the entire right side was swollen. As I find, on further inquiry, the swelling principally affected the right side of neck instead of jaw, I am inclined to think that the swelling and pain were due to some vaso-motor trouble. At the end of six months the swelling disappeared, and she began to be affected with twitching, which began in her hands. She was admitted to the hospital last Saturday, or a week ago to-day. At that time there was violent twitching of all the voluntary muscles of the body, especially of the legs and arms. At times, the jerking of the muscles was so violent that it was difficult to keep the patient in bed. The grimaces of the face were well marked.

The *diagnosis* here lies between two diseases, athetosis and chorea. *Athetosis* is a disease which more commonly follows severe lesions of the brain, especially giving rise to hemiplegia, where the lesion is somewhere in the region of the optic thalamus. Athetosis, as a rule, is unilateral. The movements of athetosis and chorea differ.

The word athetosis means the want of fixation. The parts are rarely ever still when the patient is awake. The motions are never quick and jerky, but there are all kinds of movements. There is frequently a vermicular-like movement of the fingers. Some fingers are slowly being flexed, whilst others are being extended. From absence of the characteristic movements of the athetosis, we can exclude this disease.

The movements of the limbs are typical of a fully developed case of *chorea*. Generally, there is no gross pathological lesion of chorea, but this is not always the case.

There are several forms of chorea. One form, known as *congenital chorea*, is hereditary, being transmitted from generation to generation, and coming on rarely before the thirty-fifth or fortieth year, and ends in mental degeneration, usually by the forty-fifth year. This form of chorea is not unilateral. I have seen one case of this variety, and in that case the family history, as far back as four generations, revealed cases of chorea which had begun by the thirty-fourth year, and the victims had become mentally deranged by

their forty-fifth year. Hereditary chorea was first described by *Huntington*, and it has been known by his name.

We have a condition of chorea known as *habit chorea*, where one child associating with another one who is suffering with chorea begins to mimic it, and the nervous habit begins to take place, which may become more or less permanent. The patient before us is suffering from the ordinary form of chorea. The severer cases present some gross pathological lesions. They are usually due to perivascular extravasation, but this only in the severe forms. The majority of cases have no gross anatomical lesion. In some, we find the lesion in the pons, the medulla, or cord.

Probably one of the commonest *causes* of chorea is rheumatism. In this country, fifteen to twenty-five per cent. of all cases of chorea apparently have rheumatism for their cause. Some state that the greatest exciting cause is fright; this is denied by other observers. Many of the cases of chorea that have come under my care since I have been in Colorado have apparently been precipitated by fright. A child running along the street meets a large dog, becomes severely frightened, and choreic movements begin a few days or weeks later. Other causes are straining of the eyes, over-study, and confinement. While chorea is not necessarily hereditary, the unstable condition of the nervous system generally is. In cases of nervous irritability, an additional nervous fright or strain of any kind may be sufficient to induce an attack of chorea.

The *symptoms* of chorea, as a rule, do not come on suddenly. They begin in one hand or one side of the face, or, in rare instances, they may begin in the leg. It is, at first, simply an unsteady movement, or an occasional twitching, and the twitching movement, when it does occur, is always sudden and jerking in character. It is never slow, like the movements of athetosis. Whenever the patient becomes nervous, the twitching becomes more violent. In some cases, we have what is known as *chorea magna*, or chorea going on to such a condition that the movements are so violent that it is scarcely possible to keep the patient in bed.

In the case of hereditary chorea to which I referred a few minutes ago, the patient was frequently thrown out of bed by the violence of the muscular contraction. I have seen him thrown off his feet while walking along the street, his limbs being in the most grotesque positions by the insane actions of the muscles.

Chorea, untreated, as a rule, lasts from six to twelve weeks. It is a disease a good deal like rheumatism. Sydenham was asked one day what was the best cure for rheumatism. He said, "Six weeks." This girl has been suffering with chorea six months.

Some cases of chorea do not end in six weeks, six months, or even six years. There is a tendency for them to become chronic. I have at present five cases of *chronic chorea* under my care. None of them have lasted less than five years, and one has existed for twenty-one years. Only one of these began in Colorado. None of these cases have been made worse by a residence at this altitude, 5,000 feet above sea level.

It may well be asked, what is the best *treatment* for chorea, or whether there is a mode of treatment by which the duration of the disease can be lessened?

The patient before us, on admission to the hospital, some seven days ago, had been affected with choreic movements for six months, and much of the time had been under some treatment for the disease, but she did not seem to be benefited. It would seem, then, that if a course of treatment, adopted at the time of her reception here, were attended by decided beneficial results, we might attribute to it some curative power of the disease, in her case, at least.

Now, remember that I told you on her admission into the hospital that the jerking of the limbs was so violent that it was with difficulty she was kept in bed. Before coming to the hospital, and throughout the entire six months of her choreic trouble, she had been allowed to sit up and walk at pleasure. I had her placed in bed and secured, so that she could not fall out and hurt herself; and, at the same time, I gave her twelve grains of antipyrine thrice daily, and increased the dose one grain each day. She is at present tak-

ing seventeen grains of the drug, thrice daily, without experiencing any unpleasant results. All the violent twitching has now subsided, and I shall request the resident physician to give only one dose of antipyrine daily, and to let this be at 8 P. M. We will order for this purpose about eighteen grains. By the administration of this dose at 8 P. M. we shall secure for the patient a good night's rest, which is very important in these cases. I shall also direct that she be given two minims of Fowler's solution of arsenic in water after each meal, and request the dose to be increased one minim each day until the physiological effects of the medicine are obtained, when the arsenic will be discontinued for a few days, and then resumed and increased as before. It is probable that by the end of another week all twitching of the muscles of any magnitude will have ceased, when the antipyrine may be discontinued, but the arsenic will be pushed to its full physiologic effects, unless the disease be cured before this is accomplished.

The measure of the first importance in the treatment of all cases of chorea, except the very lightest, is absolute rest in bed. The rest in the recumbent posture should be maintained until the disease is practically cured. If all cases of chorea were treated with rest, it is probable that we should see fewer cases of chronic chorea. So far, I have not seen an acute or sub-acute case of this disease pass into the chronic variety where rest had been insisted upon in the early stage of the malady.

As the mode of treatment adopted in the patient before us is not the one usually followed for the treatment of choreic patients, it seems to me that I may, with advantage to you, call your attention to it a little more in detail.

In all cases of chorea, I insist upon my directions being carried out implicitly; and if those who have charge of the patient show any hesitancy in doing this, I refuse to assume charge of the patient until I feel that I can rely upon their complete co-operation.

In the *mildest* cases of chorea, in which there is only an occasional twitch of a muscle, the patient is not confined to the bed, but is allowed to sit part of the day, and to lie on a lounge an hour or two during the forenoon and afternoon. The little patient is allowed to amuse himself, but no run-

ning, romping, or violent exercise is permitted. When the weather is such as to permit it, sitting in the open air is encouraged. The food is nutritious, digestible, but non-stimulating. The condition of the stomach and bowels is always carefully looked after. At the beginning of the treatment, the patient receives as many grains of antipyrine at bed-time as he is years old, and the dose is increased one grain each day until all muscular twitching stops. In such mild cases, arsenic is given from the first; one minim of Fowler's solution is given, well diluted with water, after each meal, thrice daily, and the dose is increased one minim each day until the point of tolerance of the medicine is reached, when it is discontinued for two or three days, or until all unpleasant effects of the drug have passed away. At the end of this time the arsenic is resumed at the dose reached when its administration was discontinued, and again the dose is increased one minim each day, if all twitching has not ceased. But, if all choreic movements have stopped, the dose is not increased from day to day, but is simply kept at the dose reached when it had to be discontinued.

As soon as the inco-ordinate muscular twitching ceases, the antipyrine is stopped, and the syrup of the iodide, or the tincture of the chloride of iron is given in two to five drop doses after each meal, thrice daily. The arsenic and iron are continued for two or three weeks after the disease is apparently cured, and the patient is encouraged to be in the open air as much as possible during the period of convalescence, but is cautioned against violent exercise or fatigue.

In all cases of chorea, except the mildest, absolute rest in bed, day and night, is insisted upon from the first, until all choreic twitching has ceased whilst the patient is quiet. I will reiterate here what I have said on former occasions, that "if I had to rely upon one method of treatment in the management of chorea, to the exclusion of all others, I should unhesitatingly choose absolute rest in bed." On sending the patient to bed, I order for the severer forms of

chorea in children as many grains of antipyrine, thrice daily, as the patient is years old, and increase the dose one grain daily until all violent movements have subsided, when I begin with one minim of Fowler's solution after each meal, and give only one dose of antipyrine each night at bed-time, or about eight or nine o'clock. As soon as most of the choreic movements have ceased, the antipyrine is stopped, and the syrup or the tincture of the chloride of iron is given thrice daily, after meals, and, at the same time, the arsenic is continued in increasing doses until the desired effect is obtained.

For one who has not used *antipyrine in large doses in chorea*, it will seem a little heroic to him to give a child, eight or ten years of age, twelve to fifteen grains of antipyrine thrice daily. It must be remembered that it is not necessary to continue this depressing agent long at a time. You should always observe certain precautions.

In the first place, antipyrine must not be administered for its anti-spasmodic effect when there is an elevation of temperature, else the free diaphoresis which will result will be attended with considerable depression. In choreic cases with rise of temperature, chloral may replace the antipyrine, but I would not advise the dose of the former to be carried to what I have recommended for the latter.

Secondly, it is necessary that the patient be kept at rest in bed while he is taking antipyrine. I have seen considerable depression follow the administration of antipyrine, when this precaution has been neglected. The patient should be seen, at least once, if not twice daily, while antipyrine or chloral is being administered. In cases where there is cardiac weakness from any cause, antipyrine or chloral must be given, if at all, with great caution. Under such circumstances, I prefer one or two-grain doses of phenacetine in combination with citrate of caffein and minute doses of cannabis indica, given every two or three hours.

In the administration of arsenic to children in increasing doses, see your little patient frequently, examine the urine at least every second day, and suspend the medicine as soon

as you get its desired physiologic effects, and then resume its administration as soon as the systemic disturbances have disappeared. Never give arsenic in full doses continuously for more than ten days or two weeks at one time. By administering arsenic intermittently, the system has an opportunity to get rid of most of the accumulated metal, and it is probable that the annoying cases of arsenical neuritis may be avoided by this precaution in its administration, especially when it is desirable, as it is in chorea, to keep the system under the influence of the medicine for a number of weeks.*

CASE III.—The third case to which I wish to direct your attention, is one of considerable interest on account of the difficulty of arriving at an accurate diagnosis.

The patient is a man, *æt.* 60, Ireland; railroading; family history unimportant. His usual weight before his illness was 175 pounds. In 1867 or 1868, he contracted malaria in Illinois, and suffered from intermittent fever for six successive years. During the time he was suffering from malaria, he contracted a heavy cold by getting his clothing thoroughly wet through one July day. The exposure was followed by severe pain in the lower portion of the spine and the right hip. The pain extended down the outer side of the right thigh, leg, and foot. He states that at that time there were two small areas, one on the outer side of the right calf, and one on the outer side of the right foot at the margin of the plantar surface, which were completely anæsthetic. The attack lasted about three weeks, and he seemed to regain his former good health after getting rid of the malaria. After this he enjoyed fairly good health until he came to Denver three years ago. About two years ago, he had pneumonia, and was confined to his bed for three weeks. During this illness he lost a great deal of flesh. Two months later, he began to complain of a lightness in his head, and his stomach became irritable. This indisposition lasted about two months.

Two months ago, he got his feet wet, and following this he suffered from severe pain in the lower portion of the spine and in the right hip. When he moved, the pain extended

*The patient who was the subject of the above discussion was discharged "cured" five weeks after the treatment was begun, and during three weeks of this time there had been scarcely any muscular twitching.

to the right knee, and sometimes as low as the right foot. At times he suffered from pain in his left hip, especially when he coughed. At times the pain, he thinks, extended from each hip to the lumbar region of the back. He says that the right knee and ankle became weak, but he was able to use them. He improved in a short time and resumed his work, but the pain in the back and right hip became so severe that he took to his bed, and has been thus confined since—a period of about two months. He has no pain when lying quietly in bed, but when he is sitting or standing, he experiences constant pain in the back and hips.

Examination—He walks fairly well, but a little feebly; no ataxia. When his legs are straight at the knees, he can bend his body well forward, showing that the sciatic nerve is not the seat of pain when put upon the stretch. Knee jerks, about normal and not much increased by reinforcing; ankle clonus absent, and no pain is caused by test for this phenomenon; extreme voluntary dorsal flexion of right foot causes him to experience pain in the region of the right hip; cremaster reflexes present; lower abdominal absent; epigastric present; power of leg muscle well preserved.

Measurements—Calf, right, $11\frac{3}{4}$ inches; left, $11\frac{3}{4}$ inches. Thigh, right, $14\frac{3}{4}$ inches; left, $14\frac{3}{4}$ inches. Flexion of the right leg at hip with knee straight causes no pain until the leg is brought at about right angles to the body, when pain is felt in right sacro-iliac joint. The left leg in same position at knee can be carried beyond right angle to the body without giving rise to any pain. Forceful pressure on the pelvic bones with one hand on each superior spinous process of the ilium causes pain in right sacro-iliac joint, and in the region of distribution of right small sciatic nerve. Pressure on the last lumbar and first sacral spines causes pain in the region of their vertebræ, but it causes no pain to radiate to either side of the spinal column, or to the region of the sciatic nerves. There is no tenderness over the nerves of the legs. He complains of a sore and painful sensation in the calf of the right leg, but the spot that is the seat of this pain is not tender to pressure. All objective sensory phenomena of the legs are normal.

Rectal examination reveals the presence of no growth in the pelvis. There is no decided muscular wasting of the legs, and all bladder and rectal symptoms are absent. He is considerably reduced in flesh. The right thigh, as shown by the measurements, is one-half inch smaller than left.

Diagnosis—Now let us endeavor to determine the nature of this man's ailment. He has been treated for rheumatism during a number of months preceding his admission into the hospital.

This is a very common diagnosis for all obscure pains of the body and limbs. Let us endeavor first to make a diagnosis on an anatomical basis, and then we shall be better prepared to study the disease from its pathological standpoint. The history of recurring pains in the region of the right sciatic nerve, especially in the terminal distribution of this nerve without tenderness of the nerve to pressure, points to neuritis of this nerve, caused by some offending body infringing upon the nerve roots, either in the spinal or vertebral canals, or in the course of the nerve through the pelvis. Pressure on the nerve in the pelvis might be caused by a tumor or an exudate, or in the spinal or vertebral canals by tumor, meningitis, or by bone trouble.

A thorough examination of the cavity of the pelvis eliminates the presence of a tumor or an exudate as the cause of the pressure on the affected nerves in this portion of their course. The absence of growth in other portions of the body, the insignificance of the pain in comparison to what we find from the irritating effects of tumors on the cauda equina, and the presence of symptoms of bone trouble, justify us in excluding tumor in the spinal canal as the cause of this man's suffering.

The sensitive condition of the right sacro-iliac joint, the recurring pains in this joint on the left side, and the tenderness in the last lumbar and first sacral vertebræ are significant of a *chronic affection of the bones*, their periosteum, or their articular substances. The formerly intermitting, and at present, remitting, character of the pain, points to the periosteum, or the intervertebral and interarticular substance as the seat of the irritation. It is probable that the dura, which forms, as you know, the sheaths of the spinal nerves, is probably also involved in the irritation. In the absence of the history of any injury to the spine, or the presence of tuberculosis in any other portion of the body,

it is probable that this man's trouble is a rheumatic arthritis, affecting the joints that are the seat of pain.

From the study of a number of cases somewhat similar to the one now before us, I am convinced that chronic rheumatism more commonly affects the joints and ligaments of the spinal column than we have been led to believe from the total silence or short references of standard works to this affection. We have three such cases in the hospital at present. They have all been referred to the neurological department, because their symptoms pointed to trouble in the nervous system. If I am right in locating the trouble in the joints of the spine, it is easy to understand why the pain is intermitting or remitting; and if it is rheumatic in nature, why it is so infrequently followed by serious bone trouble or nerve degeneration. When these joints are inflamed, the dural sheaths of the nerves become irritated, and give rise to pain in the course of the nerves that pass through the affected portion of the dura.

Whether these cases are rheumatic in their nature or not, the treatment is the same as it is in other cases of bone disease. The prognosis, however, differs from that of tuberculous or traumatic bone affection, as breaking down of bone is almost unknown to occur from rheumatism, and the organic changes that take place in the osseous system are limited to the articular structures.

The *treatment* should consist of rest in bed, counter-irritation over the lumbo-sacral region of the spine, and over the affected sacro-iliac joint, and internally the administration of potassium iodide in about ten grain doses after meals, thrice daily. The diet should be generous and nutritious, but non-stimulating. Milk, eggs, fish and oysters are preferable to a generous meat diet in rheumatic subjects.

A few remarks in regard to the *manner of applying counter-irritation in the milder forms of bone disease*, especially of the spinal column and the sacro-iliac joints. In a few cases, thorough vesication with the Spanish fly seems to accomplish the desired result; but after a rather extended experience in the treatment of these affections, I am convinced

that the actual cautery is more effectual, and shortens the course of the bone trouble very much. For persons who are not too timid, repeated light applications of the cautery, at white heat, without administering an anæsthetic to the patient, are the most desirable. However, as most persons shrink from having the hot iron applied to them unless they are under the influence of an anæsthetic, it is better to burn pretty thoroughly and less frequently.

In some cases of bone trouble, when I have succeeded in effecting only temporary benefit from weekly applications of a blister extending over a period of several months, the thorough application of the actual cautery has accomplished more in weeks than blistering had done in as many months. The use of the actual cautery and absolute rest in bed, together with the administration of potassium iodide, occasionally alternated with sodium salicylate, enabled the patient to walk without pain or discomfort in about two months after he entered the hospital.

Proceedings of Societies, Boards, etc.

MEDICAL EXAMINING BOARD OF VIRGINIA.

The Second Semi-Annual Meeting of the Ninth Annual Session commenced in Charlottesville, October 4th, 1893.

The Board was called to order by its President, Dr. Hugh M. Taylor, at 10:45 A. M. The minutes of the preceding meeting were read and approved.

On roll-call, the following members responded to their names: Drs. Irving, Finney, Winston, H. M. Taylor, T. J. Taylor, Harrison, R. W. Martin, R. S. Martin, Buckner, Chancellor, Jones, McGuire, Parrish, Brown, Hicks, and Glasgow.

On call for the reports of the Sections, a discussion arose as to the best methods for conducting the examinations. After quite a warm advocacy of the old method by Drs. Brown, Buckner and others, it was unanimously decided to return to the original method—*i. e.*, the whole Board, instead of the Local Committee, conducting the examination.

Dr. Hugh M. Taylor now offered his resignation as President, which, after a few remarks of regret expressed by Dr. Brown, and a response by Dr. Taylor, was accepted.

Dr. Rawley W. Martin, of Chatham, was unanimously elected President. The Board now adjourned until the following morning.

Thursday, October 5th, the Board was called to order at 10 o'clock. The reports of all the Sections having been received, giving the percentage acquired by those who had recently stood examination in Richmond, September 20th, 21st, and 22nd, the result was tabulated, and twenty-three out of the thirty-six applicants were found to have attained the requisite percentage, and were declared eligible to practice medicine in Virginia.

A committee, consisting of Dr. R. S. Martin, the President and the Secretary, were appointed to revise the Sections.

Some little routine business followed, and the meeting adjourned until its regular meeting in April, 1894.

ALPHABETICALLY ARRANGED LIST OF THE APPLICANTS FOR EXAMINATION TO WHOM LICENSES WERE GRANTED TO PRACTICE MEDICINE IN VIRGINIA, AFTER DUE EXAMINATION SEPTEMBER 20TH, 21ST AND 22ND, 1893, WITH THEIR POST-OFFICES, COLLEGES AND YEARS OF GRADUATION. [For the Questions asked in each of the Eight Sections, see October No. of this journal, pages 617-620, inclusive.]

- C. E. Booth, Low Moor, Va., Rush Med. Col., Chicago, 1871.
 W. W. Chaffin, Foster's Mills, Wythe Co., Va., Jefferson Med. Col., Philadelphia, 1893.
 Warren Coleman, University of Maryland, New York, N. Y., 1891.
 Robt. B. Cullers, Cedar Point, Page Co., Va., Col. Phys. and Surg., Baltimore, 1893.
 H. Clay Carson, Mouth of Wilson, Grayson Co., Va., Col. Phys. and Surg., Baltimore, 1893.
 Jno. P. Davidson, St. Vincent's Hosp., Norfolk, Va., Univ. of Va., 1893.
 P. P. Fauntleroy, Ret. for the Sick Hosp., Norfolk, Va., Univ. of Va., 1893.
 J. J. France, Portsmouth, Va., Univ. of Penn., 1893.
 Thos. B. Fuqua, Fork Union, Fluvanna Co., Va., Univ. of Va., 1893.
 W. C. Gordon, Spring Creek, Rockingham Co., Va., Col. Phys. and Surg., Baltimore, 1893.
 S. P. Guerrant, Roanoke, Va., Nat. Univ. of Ohio, 1893.
 Jos. A. Hodges, Richmond, Va., Univ. of Va., 183.
 D. B. Householder, Lovettsville, Va., Univ. of Md., 1893.
 W. J. Hall, Kelly, Tazewell Co., Va., Univ. of Va., 1893.
 J. H. Jones, Covington, Va., Univ. of Mich., 1893.
 J. Turner Kelley, Moore's Store, Shen'doah Co., Va., Balt. Med. Col., 1893.
 D. Bell Kerr, New Hope, Augusta Co., Va., Univ. of Va., 1893.
 W. E. McConville, Charlottesville, Va., Univ. of Va., 1893.
 M. J. Payne, Locust Grove, Orange Co., Va., Jeff. Med. Col., Phila.
 T. W. Sims, Roanoke, Va., Univ. of Va., 1893.
 C. N. Sowers, Low Moor, Va., Univ. of Mich., 1893.
 Jos. E. Taylor, Huguenot, Powhatan Co., Va., Med. Col. of Va., 1892.
 Oscar W. Woods, Roanoke, Va., Univ. of Va., 1893.

INSTITUTIONS REPRESENTED BY THE APPLICANTS

BEFORE THE

MEDICAL EXAMINING BOARD OF VIRGINIA,

FROM THE ORGANIZATION OF THE BOARD,

Jan'y 1st, 1885, to Jan'y 1st, 1894.

	Total Number from each Institution	Total Number Licensed First Exam	Total Number Rejected First Exam	Licensed on Second Examination.	Rejected Second Examination.	Rejected Third Examination.	Licensed Third Examination.	Incomplete or Withdrew.
Medical College of Virginia.....	117	92	18	6	1	1	...	6
University of Virginia—Medical Department.....	76	75	1	...	...	...	...	...
College of Physicians and Surgeons, Baltimore.....	98	74	21	5	3	...	...	3
University of Maryland, School of Medicine.....	108	79	28	...	...	...	...	1
Baltimore Medical College.....	23	7	14	2	4	...	...	2
Baltimore University—School of Medicine.....	6	...	6	...	1	...	...	...
Washington University, Baltimore, (Extinct.).....	1	...	...	...	...	...	...	1
National Medical College, Washington, D. C.....	1	...	1	...	...	...	...	...
University of Georgetown, D. C., Medical Department	1	...	1	...	...	...	...	...
Howard Univ. Med Dept., Washington, D. C. (Color'd)	20	5	15	...	4	1	...	...
University of Maryland and Baltimore Medical Coll..	1	...	1	...	...	...	...	...
Georgetown College, Washington, D. C.....	1	...	1	...	...	...	...	...
Jefferson Medical College.....	31	22	8	2	...	...	...	1
Jefferson Medical College and University of Virginia.	1	1	...	...	...	...	...	...
University of Pennsylvania—Medical Department....	8	8	...	...	...	...	...	...
Medico-Chirurgical College of Philadelphia.....	1	...	1	...	1	1	...	...
Medical College of Philadelphia.....	1	...	1	...	...	...	...	...
Woman's Medical College of Pennsylvania.....	1	1	...	...	...	...	...	...
Hahnemann Med. Coll and Hosp. (Homœop.), Phila..	3	2	1	...	...	...	...	...
University of the City of New York—Medical Dept..	25	17	8	...	1	...	...	...
University of New York.....	1	...	1	...	...	...	...	...
University of Virginia and New York.....	1	1	...	...	...	...	...	...
Bellevue Hospital Medical College, New York.....	15	14	1	1	...	...	...	...
University of Va. and Bellevue Hospital Medical Coll.	1	1	...	...	...	...	...	...
College of Physicians and Surgeons, New York.....	9	8	1	...	...	...	...	...
Geneva Medical College, New York (extinct).....	1	1	...	...	...	...	...	...
Coll. Phys and Surg., New York, and Univ. of Va...	1	1	...	...	...	...	...	...
Long Island College Hospital, Brooklyn.....	1	...	1	...	...	...	...	...
Yale Medical School, New Haven.....	1	1	...	...	...	...	...	...
University of Vermont, Burlington.....	2	1	1	...	...	...	...	...
Miami Medical College, Cincinnati.....	2	2	...	...	...	...	...	...
Columbus Medical College.....	3	2	1	1	...	...	...	...
Homœopathic Hospital College, Cleveland.....	2	2	...	...	...	...	...	...
Pulver Medical College, Cincinnati (Homœopathic)...	1	1	...	...	...	...	...	...
Louisville Medical College.....	11	5	6	...	...	...	...	...
University of Louisville—Medical Department.....	9	6	3	...	...	...	...	...
Kentucky School of Medicine, Louisville.....	4	4	...	...	...	...	...	...
Hospital Medical College, Louisville.....	7	4	3	...	...	...	...	...
Vanderbilt University, Nashville.....	5	4	1	1	...	...	...	...
University of Tennessee, Nashville.....	1	1	...	...	...	...	...	...
University of the South, Sewanee, Tenn.....	1	...	1	...	...	...	...	...
Leonard Medical College, Raleigh (Colored).....	11	9	2	...	...	...	...	...
Medical College of State of South Carolina, Charleston	2	1	1	1	...	...	...	...
Southern Medical College. Atlanta.....	3	1	2	...	...	...	...	...
Atlanta Medical College.....	1	...	1	...	...	...	...	...
Tulane University—Medical Dept—New Orleans....	2	2	...	...	...	...	...	...
University of Louisiana (probably Tulane University)	1	1	...	...	...	...	...	...
Medical College of St. Louis (Extinct) ..	1	1	...	...	...	...	...	...
St. Louis Medical College, Missouri.....	1	1	...	...	...	...	...	...
Detroit Medical College, Michigan.....	2	1	1	1	...	...	...	...
University of Michigan—Medical Dept., Ann Arbor.	4	4	...	...	...	...	...	...
Michigan College of Medicine and Surgery, Detroit...	2	1	1	...	...	...	...	...
Chicago Homœopathic Medical College.....	1	1	...	...	...	...	...	...
Hannemann Medical College and Hospital, Chicago...	1	1	...	...	...	...	...	...
University of Heidelberg, Germany.....	1	1	...	...	...	...	...	...
St. George's Hospital, London.....	2	1	1	...	...	...	...	...
King College, London.....	1	...	1	...	...	...	...	...
Tennessee Medical College, Knoxville.....	1	...	1	...	...	...	...	...
Chattanooga Medical College.....	1	...	1	...	1	1	...	...
Western Reserve Medical College, Cleveland.....	1	1	...	...	...	...	...	...
Rush Medical College, Chicago.....	2	2	...	...	...	...	...	...
National University of Ohio.....	1	1	...	...	...	...	...	...
Eclectic School, Cincinnati.....	1	...	1	...	...	...	...	...
Cincinnati Medical College.....	1	...	1	...	...	...	...	...
Colleges unknown.....	7	4	1	...	...	...	...	2
Non-Graduates.....	52	18	28	1	1	...	...	6
Totals.....	706	494	190	21	18	4	...	22

Nos. of examination papers.	LIST OF INSTITUTES Whose Graduates were Re- jected by the Med. Exam. Board of Va., at its Regular Fall Meeting, September, 1893 With Percentage Marks re- ceived in each Section.										Average percentage	Remarks.
	COLLEGE OF GRADUATION.											
		Chemistry.	Anatomy.	Physiology.	Hygiene and Med. Jurisprudence.	Material Medica and Therapeutics.	Obstetrics	Practice.	Surgery.	Aggregate.		
1	Non-Graduate.....	37	33 $\frac{1}{3}$	75	37	80	80	75	75	492	61 $\frac{1}{2}$	
4	Eclectic School, Cincinnati...	54	44	79	47	56	75	100	70	525	65 $\frac{1}{2}$	
8	Chattanooga Med. Col., Tenn.	60	28	85	61	66	78	48	75	501	62 $\frac{1}{2}$	
10	Non-Graduate.....	55	30	76	35	80	82	70	75	503	62 $\frac{1}{2}$	
11	Baltimore Medical College.....	65	35	45	43	68	94	65	75	490	61 $\frac{1}{2}$	
12	Medical College of Virginia...	48	33 $\frac{1}{2}$	70	63	69	94	75	82	534	66 $\frac{1}{2}$	
13	Baltimore Medical College.....	55	38	90	33 $\frac{1}{3}$	80	95	70	75	536	67	
15	Baltimore Medical College...	52	40	75	55	55	82	75	75	509	63 $\frac{1}{2}$	
5	University of Maryland.....	52										
22	College Phys. and Surg., Balt.	60	33 $\frac{1}{3}$	77	33 $\frac{1}{2}$	70	87	100	80	540	67 $\frac{1}{2}$	
24	Tenn. Med. Col., Knoxville...	65	71	66	57	70	80	90	48	547	68 $\frac{1}{2}$	
26	College Phys. and Surg., Balt.	85	53	91	35	48	79	50	75	516	64 $\frac{1}{2}$	
35	Medical College of Virginia...	55	28	47 $\frac{1}{2}$	62 $\frac{1}{2}$	80	92	73	84	522	65 $\frac{1}{2}$	
											Withdr'n.	

INSTITUTIONS REPRESENTED BY THE APPLICANTS
WHO CAME BEFORE THE
MEDICAL EXAMINING BOARD OF VIRGINIA,
IN SESSION AT RICHMOND, VA.,
September 20, 21, 22, 1893.

	Total Number Applicants from each College.	Total number Applicants Licensed from each College.	Total Number Applicants Rejected from each College.	Withdrawals.
Medical College of Virginia.....	3	1	2	
University of Virginia—Medical Department.....	9	9		
College Physicians and Surgeons, Baltimore.....	5	3	2	
University of Maryland—Medical Department.....	3	2	1	
Baltimore Medical College.....	4	1	3	
Jefferson Medical College.....	2	2		
Michigan University, Ann Arbor.....	2	2		
Rush Medical College, Chicago.....	1	1		
University of Pennsylvania.....	1	1		
Chattanooga Medical College.....	1		1	
National University of Ohio.....	1	1		
Tennessee Medical College, Knoxville.....	1		1	
Eclectic School, Cincinnati.....	1		1	
Non-Graduates.....	2		2	
Totals.....	36	23	13	

PHOSPHORUS PILLS.—“I have used Messrs. Warners’ Pil. Phosphori cum Quinia Comp. for quite five years in cases of great debility, and have proved them to be most invaluable in restoring health and strength, an especially in the cure of an epileptic young lady who now takes two daily and with marked benefit, indeed so much so, that the fits which were of frequent occurrence, now seldom attack her; and certainly her improved condition I entirely attach to this medicine and no other.”—T. J. CARTER—RACKHAM, M. D., (The Grove) Catton, Nr. Norwich, England.

MEDICAL SOCIETY OF VIRGINIA

The Twenty-Fourth Annual Session, held in Charlottesville, Va., October 3rd, 4th and 5th, 1893, was a remarkably successful one—the more so when it is remembered that it was during a season of the most depressing financial embarrassment that has afflicted this country for about twenty years. The attendance was as large as it was the year before, and included a number of distinguished gentlemen from other States, who contributed greatly to the interest and profit of the session. Among such, were Drs. George Tucker Harrison—an Honorary Fellow of the Society—of New York, N. Y.; Joseph Taber Johnson—elected an Honorary Fellow—of Washington, D. C.; Carter S. Cole, of New York, N. Y.; W. T. Howard, Jr., H. H. Biedler, and W. D. Booker, etc., of Baltimore, Md. Never, in its history, has the Society been shown greater hospitality on the part of the resident profession. The Microscopical Soirée, at the University of Virginia was a unique affair, well conducted by the students of the Medical classes, under the direction of the Professors of the Histological, Pathological and Biological Departments. The well-trained students in charge of the adjusted microscopes made the evening one of long-to-be-remembered interest and instruction to the visitors. The Banquet was sumptuous, well-arranged, and the enjoyment of the occasion was heightened by the attendance of ladies.

Want of space compels the laying aside of a detailed report of the session—in fact, we have to lay aside until the next issue some of the papers and synopses prepared for this issue. So that we have to content ourselves with this partial report of the proceedings.

The Session was called to order by the President, Dr. Herbert M. Nash, of Norfolk, Va., at 8 P. M., Tuesday, October 3rd. Addresses of welcome were delivered by Mayor Hankel and Dr. Hugh T. Nelson.

The "Annual Address to the Public and Profession" was delivered by Dr. J. T. Graham, of Wytheville, Va., his subject being

The Physician and the Public; Some of Their Reciprocal Relations.

The address gave extended consideration of the conditions necessary to a successful study and practice of medicine. The physician was counselled to abide by no narrow prejudices or rock-bound precedents, but to go onward, as

many important scientific principles were yet undiscovered. The speaker urged the counselling of patients as to marriage in regard to results that would affect racial conditions, as well as the future happiness of their offspring. Cheerfulness and gentleness are elements of success in the physician's work. Besides his powers to raise up the sick, he can brighten the life of all humanity, and widening the scope of his influence, his work leads up to ministration to the soul.

The physician's duty and relation to his professional brethren, and the duty of patient to physician, were the themes of the latter portion of Dr. Graham's address. "Throw petty jealousies to the wind," says he, "and let us uphold and honor our profession by upholding and honoring all that is just and honest and upright and true in each other." He advised a liberal policy of encouragement for the progressive and energetic, and a closely cemented union as in common purpose to relieve pain, cure disease and save life. A disease affecting the vital part of the practice of medicine was mentioned as the "Patent Medicine Humbug." The prescribing of patent medicines by a physician stamped him as too negligent to study his cases and prescribe well-known remedies, and no addition of value to his profession, as well as a self constituted and unremunerated advertising agent of the nostrums of the unscrupulous manufacturer. The speaker gave some wholesome advice as to the patient's duty to the physician, and his needs and demands, advising sympathy, charity, gratitude, confidence, and regard for the ever-toiling, thoughtful and self-sacrificing guardian of health; and closed his address with a glowing tribute to the life of the faithful physician, incidentally citing the honorable career of Dr. Jas. L. Cabell as a striking type of the high-toned gentleman, humble Christian, and true physician; his influence always pure, his work always thorough, still live in our profession as a monument to his memory, and will be felt long after bronze has rusted away and marble has crumbled into dust."

The Committee on Examination of the six Essays offered in competition for the \$100 Prize of Dr. Hunter McGuire for the best Essay deemed worthy of the Prize, through the Chairman, Dr. Hugh T. Nelson, of Charlottesville, reported in favor of the Essay with the *nom de plume* "Rusticus." The Secretary opened the envelope corresponding, and announced that the successful Essayist was Dr. R. L. Payne, Jr., of Lexington, N. C. [This Essay is published in full as Article I in this November number.]

Dr. Hunter McGuire authorized the Secretary to announce that he would offer \$100 Prize for the best Essay deemed worthy of the Prize to be awarded during the 25th Annual Session on *The Causes, Symptoms, Diagnosis and Treatment of Appendicitis*. [Details as to the character of Essay required, which should indicate some original work by the author, will be published in the forthcoming Volume of *Transactions*, as also in the Advertising pages of the December No. of this journal.]

No Essays were received in competition for the Prize of \$100 offered by Dr. Joseph Price. The Secretary stated, however, that he had heard that several Fellows had intended to compete for the Prize on the subject of *History of Surgery and of Surgeons in Virginia*, but had given up the competition because of the expense necessary to secure the literature requisite for such a *History*. Dr. Joseph Price had authorized the Secretary to announce the continuation of the offer for the Annual Session of 1894. Whereupon, Dr. Herbert M. Nash, of Norfolk, Va., with the consent of Dr. Price, authorized the Secretary to announce that he would add \$100 to the offer of Dr. Price; so that the offer for the Session of [November] 1894 is to be known as *Drs. Price and Nash's Prize Essay Offer of \$200 for the best Essay deemed worthy of the Prize giving the History of Surgery and of Surgeons in Virginia*.

The subject of the Address of the President, Dr. Herbert M. Nash, of Norfolk, Va., was "*Mutability of Medical Doctrines; Hence the Futility of Dogmatism in Medicine*." This excellent paper was taken up with a statement of some of the more prominently accepted doctrines of the first half of the present century, which have now been exploded and for which diametrically opposing doctrines are now almost universally substituted. The paper was an able one in showing how discovery of one fact after another led to such mutations of opinion as to bring on the doctrines of the present day.

The Leader of Discussion on *Chronic Nephritis*, Dr. R. M. Slaughter, of Theological Seminary, Va., read a lengthy paper—well prepared and well received. [We hope to find space in December number to give a full synopsis of this paper, as well as the discussion that arose on the subject.]

Election of Officers, etc., for 1893-94.

President—Dr. Wm. P. McGuire, of Winchester, Va.

Vice-Presidents—Drs. Robert J. Preston, of Marion; Wm.

G. Rogers, of Charlottesville; and R. M. Slaughter, of Theological Seminary, Va.

Recording Secretary—Dr. Landon B. Edwards, of Richmond, Va.

Corresponding Secretary—Dr. J. F. Winn, of Richmond, Virginia.

Treasurer—Dr. Richard T. Styll, of Hollins, Roanoke Co., Va. (which is a money order postoffice).

Executive Committee—Hon. Fel. Drs. Hunter McGuire, of Richmond; J. Herbert Claiborne, of Petersburg; E. W. Row, of Orange. Active Fellows: Drs. M. D. Hoge, Jr., and Thomas J. Moore, of Richmond; Recording Secretary and Treasurer, *ex officio*.

Committee on Nominations of Applicants for Fellowship—Drs. Wm. D. Turner, Fergusson's Wharf; A. S. Rixey, Culpeper; G. M. Nickell, Millboro Depot; R. H. Latané, Buchanan, and L. G. Pedigo, Roanoke.

Committee on Publications—Drs. Hugh M. Taylor, J. F. Winn, and M. D. Hoge, Jr., all of Richmond. Recording Secretary and Treasurer, *ex officio*.

Neurological Committee—Drs. John S. Apperson, Marion; Thos. W. Smith, Bethel Academy; L. Lankford, Norfolk; C. V. Robinson, Petersburg; and C. E. Busey, Lynchburg.

To Deliver Annual Address to Public and Profession, Session 1894, Dr. R. S. Martin, Stuart, Va.

Subject for General Discussion, Session, 1894—Appendicitis. *Leader*, Dr. Wm. L. Robinson, Danville, Va.

Twenty-Fifth Annual Session will be held in city of Richmond—probably November, 1894.

Members Medical Examining Board of Virginia (to fill vacancies caused by resignation)—*From State at Large*, Drs. A. S. Priddy, of Keysville, and C. M. Blackford, Jr., of Lynchburg. *Third Congressional District*, Dr. Jos. B. Moore, of Aylett's.

Papers were then called for.

Typhoid Fever as it Occurred in Charlottesville, Va., from July 1st to September 15th, 1893.

Dr. W. G. Rogers, of Charlottesville, Va., stated that these cases of typhoid fever treated by him from July 1st to September 15th, 1893, are of special interest to the people of Charlottesville and vicinity, as tending to show that this disease has been, in almost all cases, caused by drinking well water, and that the mountain water from the reservoir is pure, and should be kept so, by the ownership by the city

of the water-shed from which water flows into the reservoir. A single case of typhoid fever occurring upon this shed would so pollute the water as to cause a widespread epidemic in and around the city. The larger number of the aforesaid cases was of severe type—more so than has been the case heretofore in seasons of high water. The low water in streams and wells seemed to intensify the disease by concentrating the poison.

The writer stated that of the 43 cases treated by him, 37 *drank well water*, and only 6 drank reservoir water from the mountains. These six occurred in localities in which there was typhoid fever last year, in which probably the typhoid bacillus from imperfectly disinfected excreta was absorbed by the soil, and thus reproduced the fever.

The microbe or germ that causes typhoid fever may remain in the ground for months, and even years, with its power to produce disease unimpaired. Other facts show that typhoid fever is feebly infectious, and may be transferred from place to place and from person to person.

There has been very little fever in Charlottesville since the establishment of water works, and it is now almost exclusively confined to those who use well water.

Nearly two-thirds of the forty-three cases prevailed in the suburbs amongst those who used well water and in districts newly built up and in which there are new wells, showing that the disease is not confined to the thickly settled districts, in which the soil is saturated with ammonia, the nitrites and nitrates from decomposed organic matter. In one of these sections there were about eighteen cases of typhoid fever, all of whom used the water from new wells, which were probably polluted by the typhoid germ in the underground streams flowing into the wells from a higher locality, where there were several cases of typhoid fever some months before.

Whilst the absorption of the typhoid bacillus into the system is necessary to produce typhoid fever, many may resist it, if the hygienic surroundings be good. He mentions several malignant cases of fever in the vicinity of offensive hog-pens, the filth of which predisposed to the disease, and afforded nutriment to the typhoid germ or bacillus; one in which symptoms of acute Bright's disease complicated with pneumonia existed for several days, attended with high fever, delirium, and failure of the urinary excretion, and pain and difficult respiration from pneumonia. After these were subdued by calomel, and by powerful diuretics

and sudorifics, as digitalis infusion internally and with hot applications to the region of the kidneys, also acetanilid and hypodermic injections of pilocarpine muriate, decided symptoms of fever set in, as diarrhœa, tympanites, great nervousness and restlessness, the fever being reduced from $105\frac{1}{2}^{\circ}$ F. to 102° F., and pulse from 140 to 120. Frequent daily sponging of the surface with cold water was used, when the fever was above 103° F., with small doses of acetanilid, when there was not too much prostration for the latter. Afterwards, turpentine and large doses of bismuth were used for the diarrhœa and tympanites, and occasionally Dover's powder. Turpentine stupes were applied daily to the abdomen.

In many similar cases, *blisters* to the abdomen were preferred as less painful and more effective. Listerine was used as an intestinal disinfectant with apparent benefit. He says that blisters do not weaken, but, by lessening the enteric disease, the cause of the weakness, they finally strengthen.

The writer also mentions several cases in which there was copious intestinal hæmorrhages about the third week of typhoid fever. These were apparently removed or checked by ten drops of the persulphate iron every four to two hours, much diluted, until the hæmorrhages ceased. He thinks ergot is ineffective, but that sugar of lead and opium often have a good effect in checking hæmorrhages in typhoid fever when given both by the mouth and by enemata.

He mentions two cases of fever that were contracted in an adjoining county and brought to the suburbs of the city near the knitting factory, where, in ten days, two others of the family got it, and in a short time others in the vicinity contracted it. He believes it feebly infectious.

All of the forty-three cases referred to recovered except one girl who had no nursing, and treatment only in the last stage. Otherwise, she would have gotten well. Forty of these cases were white and three colored.

He thus concludes: Typhoid fever is a preventable disease. He confidently looks forward to the time in the early future when the supply of mountain water will be sufficiently abundant (when Dr. H. Nelson, chairman of the city water committee, gets his pump and engine in operation), not only for drinking, bathing, washing, and operating factories, but for establishing a thorough system of sewerage, when it is hoped and believed that this and similar diseases, already

much diminished by our pure water supply, will cease to exist in our midst, and our city will continue to increase in healthfulness, as it has in population, and become the sanitarium, as well as the centre of education and culture of the South.

Typhoid Fever as Met with in Harrisonburg and Vicinity.

Some of the points emphasized by Dr. J. H. Neff, of Harrisonburg, Va., in his paper relating to the history, cause, and treatment of typhoid fever as met with in Harrisonburg and vicinity are the following:

1st. Typhoid fever existed in Harrisonburg and vicinity long before 1840, notwithstanding the generally received opinion to the contrary.

2nd. Remittent and intermittent fevers were not the prevailing febrile affections of his section of the Valley long before 1840, notwithstanding accredited testimony to the contrary.

3rd. The location of Harrisonburg, the relation of its water-shed to the water supply, explains the domestication of the typhoid poison.

4th. The type of disease is becoming milder, but it is more apparent than real. In earlier years, affections due to the typhoid cause were called by other names. The application of principles, instead of drugs, at the onset of these affections, limits, to some extent, the local morbid lesions, and other corresponding symptoms are not seen.

5th. Individuals going to places where the disease is endemic are more susceptible than natives; the disease in them is more typical and more fatal. Aborted and undeveloped cases may, in part, be explained by the partial protection which frequent exposure to the typhoid poison has given.

6th. Preventive treatment requires absolute destruction of discharges from infected patients, and the non-use or boiling of all suspected water.

7th. Antiseptic treatment has, as yet, not given in practice results which warrant its routine use.

8th. The coal-tar products cannot be safely used in continuous high pyrexia, unless during the early days in unusually robust subjects. Their use is limited to milder cases and to children.

9th. In continuous high pyrexia, 103°-104°, and hyperpyrexia, 105°, etc., the cool bath treatment, systematically used, offers the best results, but the experienced judgment it re-

quires, and the skillful nurses to apply it, will always limit its use in his section.

10th. Continuous pyrexia above 103 increases structural changes, exhausts the nervous system, and weakens the heart. Quinine, in doses sufficient to remit the temperature below 102 in the morning, increases the power of resistance to the disease without tending to paralyze the heart. Combined with the cold-water treatment in various ways, it remains one of our most useful drugs in genuine typhoid fever.

Place of Electricity in General Practice.

Hon. Fel., Dr. J. Herbert Claiborne, of Petersburg, Va., said that an agent so potent, and so pervasive as electricity, can but attract the attention of the thoughtful and observant; and though its phenomena have been investigated, and its laws formulated, by the wisest and most ingenious of men, yet its latter day developments demonstrate the fact that its possibilities have not been counted or conceived of. Its power, its subtlety, and its mystery, early attracted the charlatan in medicine; and its exhibitions were so long associated with fraud and empiricism that the respectable enquirer, though honestly interested in the subject, was deterred from its pursuit by the questionable company which it kept. And now, though from the day of Du Bois Raymond, its entire respectability has been established, and its power for good as a therapeutic agent been acknowledged, yet its true place in medicine has been, and is, difficult to define. The enthusiast, the nihilist, the satirist, and the specialist, has each his story to tell.

It would seem now that enough is known of its laws and of their operations to assign it to that honorable position in physic that is accorded to it in art. For fifteen years I have been handling it, with the other armamentaria of my office, and whilst I have never found any marvellous or mysterious virtue in it, yet, as adjunct and helper, it has added wonderfully to the slim resources of a general practitioner.

In some cases in my clinique, the practical results of electricity have been so striking, and its benefits of so much worth, that I have been often inclined to publish them; but I felt that some physicians read such reports with undisguised incredulity, and other some with open and outspoken and offensive questionings of one's veracity, and one risked a quarrel in putting himself in print.

But to day, when I can stand behind such men as Mr.

Thos. Keith, and Engleman, and Goulet, and Massey, and Erb, not to mention the older and no less worthy workers in the same field, I do not fear the smaller guns, which may be turned upon me. Mr. Keith says that "Electricity, in any form, when applied to the treatment of disease, is set down by many medical men as pure quackery, simply because they know nothing about it, and won't take the trouble to learn." Speaking of one subject—that of uterine fibroids—he says: "If any one should hold on to the surgical instrument, it is myself, for my success has been greater than that of any other. I have, however, thrown over all surgical operations for this new treatment, and the longer I follow it the better I like it." After this backing, Dr. C. thought he could afford to publish the following case:

1888, October.—Mrs. B. Menorrhagia. Patient 36 years of age, married, and mother of two children—last, 8 years old. She has been in fair health, and an active worker in domestic matters, until some six years ago. Since then her monthly courses have been too profuse, amounting to a hæmorrhage at each menses; and the flow not ceasing during the interval. She is emaciated, exsanguine, color of greenish yellow, stomach irritable, no appetite, and bowels torpid. She has been confined to her bed for some weeks, and cannot bear the sitting posture without fainting. On examination, the os was found patulous, and the neck soft and flabby. Attached to the womb laterally, on the left, and external to that organ, was a fibroid, of the size of a large cocoanut. To the right ovary was attached another, as large or larger. The abdominal walls were so thin that these tumors could be literally taken up and handled as far as their local attachments would allow. There were no marked nodulations upon them, but each had a decided pedicle. There was no pain, and no tenderness. Her general condition was bad; indeed, critical in the extreme. She was placed on Rockbridge Alum Water, every three hours, in such doses as her stomach would bear, alternating with 20-drop doses of fluid extract of ergot, under similar limitations. In addition, a Faradic current, as strong as she could bear, was passed for fifteen minutes, daily,—one electrode over the sacrum and one over the uterus.

After a few days of treatment, the flow began to decrease, but it was some weeks before she was strong enough to sit up even in bed.

As soon as I thought she was strong enough to bear the announcement, I told her that those abdominal tumors

would have to be removed; that they were the cause of all of her trouble, and that she could not get well unless the cause was removed. But she would not hear of a surgical operation; said that she preferred death. I then commenced the use of the galvanic current, of about 40 milliamperes, every other day, hoping, but not promising, that its electrolytic effect might remove or diminish the tumors, and so take the place of an operation, which I knew she would never submit to. Taking advantage of the tenuity of the abdominal walls, before referred to, I caught up each tumor successively, between two hand electrodes, and thus passed the current through them. I resorted to no puncture, no insulated needle, but relied exclusively on the electrolytic effect of the current. During the treatment, the epidermis became somewhat scalded on several occasions, but the pain was insignificant, never enough to cause her to cry out.

After some twenty sittings of about twenty minutes each, the tumors had been reduced to one-half or two-thirds of their size, the menorrhagia was relieved, the general health restored, and now, after five years, there has been no return of any unpleasant symptoms, and the tumors have not enlarged.

Another case Dr. Claiborne reported of the electrolytic effect of the galvanic current, and said: Mr. Blank, aged 50, presented himself, with an enlarged mammary gland, as large as that of most women of his age. It had been growing for six months, was hard, nodulated, and painful—the sharp stinging pains of a scirrroid. The gentleman's health was good, and I advised immediate excision. He would not listen to such a proposition—said he would take his chances before he would allow a knife to be used on him. I then subjected him to the same treatment as the case just reported. Catching up the gland between two hand electrodes, I passed the galvanic current directly through it. It was a short circuit, and he could not bear more than ten or fifteen milliamperes, and that for not more than ten minutes at a time. The skin was a little sodden, and scalded every day, but in the fear of the knife he made no objection to that. In six weeks, three sittings a week, the tumor was entirely dissipated, and there has not been any return of it.

Dr. Claiborne further said that these two cases, of themselves, illustrated the fact that electricity had a place in surgery, and that its electrolytic effects were real and could be realized.

By saturating one of the electrodes with tincture of iodine,

or with a solution of bichloride of mercury, its electrolytic effects can be still further increased on the principle of electric-osmosis, or cataphoresis. Experiments were also being made which would probably add to the uses of the galvanic current by making it the carrier of cocaine, morphine, etc., on the same principle, and thus inducing local anæsthesia for minor operations.

Dr. Claiborne said, in this connection, that he hoped Fellows would not understand him as advising the galvanic current as a substitute for the knife, or the hypodermic syringe, in all cases, but only as another instrument, and as a strong resource in our surgical armamentaria. And quoting again from one of the greatest of modern surgeons, Mr. Keith, he said: "That every time any disease could be cured without resorting to a bloody operation, progress is made in our art, there is a gain to humanity."

Dr. Claiborne then referred to the use of the galvanic current in minor operations, in the removal of papillomata, nævi, and small operations on the face, as a resource which few surgeons would be willing to dispense with, who had ever tried it.

He then referred to the use of electricity in general medicine, for epilepsy, rheumatism, neuralgia. Other diseases—recalling the fact that Anstie, the great authority in neuralgia, had long ago placed it next to morphine in that malady, and then reported several cases confirming his views.

In the discussion, Hon. Fel. Dr. Hunter McGuire, of Richmond, strongly endorsed the ground taken by the writer, and added report of some confirmative experience and observation.

Dr. J. Edward Tompkins, of Fredericksburg, Va., read a paper on

Infantile Diarrhœa.

He considered the disease in three forms—(1), simple; (2), inflammatory; (3), choleric form, or cholera infantum—dwelling particularly upon the etiology which furnishes a key to the treatment. The affection, he states, may be due to (1), *heat*, which acts directly upon the child, depressing the vital forces, and indirectly by its effect upon garbage, etc., producing putrefactive changes, and thus furnishing a soil for disease germs. Heat alone is not responsible for so many cases, as heat and unsanitary conditions combined. (2) *Improper nourishment*, brought about in many ways, an important one of which, often overlooked in bottle-fed infants,

is too great a disproportion between the age of the child and that of the calf of the cow from which milk is obtained. (3) *Second summer*, since at this time the child is being fed and probably weaned; besides, its being able to walk or crawl, puts articles of food in its reach not intended for its use. In the second summer, evolution of the teeth takes place, also development of gastric and intestinal follicles, the two causes acting conjointly, dentition reflexly through the nervous system. (4) *Bacteria*, there being many forms in infantile diarrhœa. (5) *Cold*. (6) *Malaria*. (7) *Age*, from six to eighteen months being the preferable time.

Morbid Anatomy.—The *simple form* is attended with scarcely any anatomical lesions. *Inflammatory Form*.—Inflammatory lesions, he states, are sometimes found in all portions of the intestinal tract, but in the ilium and colon, inflammation is the rule, being of greatest intensity at the ileo-cæcal valve, and at that portion of the gut just above the sigmoid flexure. There is also found ulceration and softening of the mucous membrane. In cases of long standing, there is ulceration of the buccal mucous membrane, and enlargement of the mesenteric glands, hypostatic congestion of the posterior portion of the lungs, passive congestion of the cerebral veins and sinuses and overlapping of the cranial bones.

Choleric form Diarrhœa.—In this form, there is marked emaciation, shown by sunken eyes, depressed fontanelle, etc. The lesions in the gastro-intestinal tract are not as constant as in the inflammatory form. There is sometimes softening of the mucous membrane of the stomach or bowels, sometimes patches of hyperæmia in the upper portion of the intestinal canal, and a tremendous outflow of serum. In the intestines, there are micro-organisms in abundance, and an increased number of leucocytes. In the brain, there is hyperæmia of the membranes, and at times slight softening.

Symptoms.—In *simple diarrhœa*, the symptoms are mild, there being from three to ten operations a day, which vary much in color, being brown, green, yellow or clay colored. Fever is sometimes present, though not a constant symptom. The pulse is usually accelerated. If the evacuations are frequent and thin, there is great loss of weight. A sympathetic cough may set in, and the brain may be involved.

Inflammatory Diarrhœa.—This, he states, usually begins gradually and may proceed from the simple form. At first, the diarrhœa is mild, but later there may be thirty, some-

times as many as forty operations a day, consisting mostly of mucus, often containing blood and undigested food. Vomiting is frequent. When it occurs late, it is an unfavorable symptom, indicating commencing spurious hydrocephalus. The temperature usually rises to 102° or 103° F. often higher; pulse accelerated. Two symptoms are met with, erythema of the buttocks and boils on the scalp, the latter acting as a conservative process of nature, preventing congestion of the meninges. There is diminution in the secretion of urine, though the bad effects from non-elimination of urea are prevented by the diarrhœa. In protracted cases, and when the patient is weak, spurious hydrocephalus often sets in. There is drowsiness, preceded by restlessness, vomiting, rolling of the head, contraction of the pupils and convulsions. *Cholera infantum* is characterized by the rapid onset of symptoms, following a previous diarrhœa or some error of diet. The evacuations are alarmingly frequent, very large and watery. Vomiting begins with purging or sets in soon afterwards. The pulse is quick, respiration accelerated, temperature 105° to 108° F. Emaciation progresses rapidly. Spurious hydrocephalus is a frequent complication of this form.

Diagnosis.—Attention to the symptoms distinguishes one form from another. There is a striking resemblance between cholera infantum and sun-stroke, but in cholera infantum the intestinal symptoms are the most prominent. Sun-stroke begins suddenly, and there is drowsiness from the first. Cholera infantum begins rapidly, but more gradually than sun-stroke, and at first there is restlessness. Cholera infantum begins after some error of diet or during a co-existing diarrhœa, and may occur at any hour, while sun-stroke usually follows exposure to great heat, and occurs most frequently during the hot hours of the day.

Prognosis.—Most children afflicted with simple diarrhœa get well, while from the inflammatory form the mortality is large. By proper hygienic and medicinal measures applied early many cases may be saved. The patient may become very much prostrated and emaciated, still get well. Choleriform diarrhœa is by far the most dangerous form of the disease, carrying off large numbers of children every summer.

Treatment.—In speaking of the treatment, he laid special stress on the value of suitable hygienic measures. Remove the infant from the influences of impure air and extreme heat; avoid farinaceous foods during the first year; allow

it to nurse the breast if possible; if not, give pure cow's milk, properly diluted. If this disagree, add a little barley water to the milk, the starch of the barley having previously been changed to dextrin, either by the addition of extract of malt or by prolonged heat. Often he finds it necessary to resort to peptonized milk, which he considers one of the very best substitutes for mother's milk. Condensed milk, if it can be obtained fresh and free from cane sugar, often agrees well. At times milk in all forms disagrees, in which case it is necessary to find a substitute. Beef peptonoids, egg albumen, with water, and some of the artificial foods, are valuable substitutes. The artificial foods which contain no starch have served him best.

Medicinal Treatment.—In the early stages, especially if there has been constipation, or the presence of undigested food be suspected, castor oil or epsom salts acts well. Bismuth subnitrate in large doses is a valuable remedy when the stools are thin but fecal. When the operations contain much mucus or blood, a combination of deodorized tinct. of opium, dilute sulphuric acid, and sulphate of magnesia does well. When the stools are acid, the acidity may be neutralized by alkalies, preferably chalk mixture. To prevent further formation of abnormal acids, improve digestion by pepsin, hydrochloric acid, etc. Antiseptics are of undoubted value, especially when the stools are offensive, among the best of which are calomel, subnitrate of bismuth, salol, salicin, and sulpho-carbolate of zinc. A favorite prescription with him is—

R—Hydrarg. chlorid. mite.....	gr. iss
Zinc, sulpho-carbolat.....	gr. iij
Pepsini puri, in lamellis.....	3 ss
Bismuth subnitrat.....	3 ij

M.—Ft. chart. No. XII.—Sig.: One powder every four hours for child one year old.

Opium is a good remedy, relieving pain, preventing tenesmus, and diminishing peristalsis, but it must be used with great caution in young children or when we suspect spurious hydrocephalus. Colonic irrigation he finds of great value, using half pint of warm water, with two lumps of prepared chalk and four drops of laudanum, for a child one year old.

For the vomiting in choleriform diarrhœa, suitable diet is the best remedy, though ten drops of elixir lactopeptine every half hour is of much value. Creasote and lime water also do well. If spurious hydrocephalus sets in, withdraw

all opiates at once, quiet restlessness with sodium bromide and the ice cap, blister behind the ears, stimulate and keep the extremities warm. For erythema of buttocks, neutralize the acidity of the discharges and apply oxide of zinc ointment. If gums are red, hot, and swollen, use lancet; correct phymosis if present.

Dr. W. T. Howard, Jr., of Baltimore, read a paper on

The Role Played by Acute Infections as a Cause of Death in Certain Chronic Diseases.

He confined his attention to cases of chronic tuberculosis and to chronic diseases of the lungs, arteries, heart, uterus, and gastro-intestinal tract. He said that acute general infections in chronic tuberculosis were common and that cases could be divided into two classes, (1) acute general tuberculosis secondary to an old tuberculous focus in some organ, with or without mixed infection with other bacteria than the tubercle bacillus—usually the pyogenic cocci; (2) acute infections with the pyogenic cocci and other bacteria occurring in the subjects of chronic tuberculosis.

Secondary general infection with the tubercle bacillus, in cases of chronic lung tuberculosis, follows the entrance of the bacillus into the pulmonary vessels and thence into the general circulation. In primary sub-diaphragmatic tuberculosis, general infection usually occurred by way of the retro-peritoneal lymphatic glands, the bacilli reaching the general circulation by means of the thoracic duct and the pulmonary circulation.

He said that the subjects of chronic nephritis often died with a croupous or a broncho-pneumonia or with acute endocarditis with general infection; that individuals with contracted kidney sometimes died with acute pleuritis, pericarditis, or peritonitis, with general infection, usually with the streptococcus pyogenes. He reported a case of acute primary general peritonitis with general streptococcus infection occurring in a man with chronic nephritis.

Many cases of chronic valvular disease of the heart, with secondary chronic nephritis, died with acute endocarditis and general infection.

In his experience in arterio-sclerosis, acute infections, both local and general, were common. Pneumonia, lobar and lobular, with pleurisy, was of frequent occurrence and often accompanied with general infection. Leg ulcers and bed sores were not infrequently the sources by means of which infection occurred in cases of arterio-sclerosis.

He reported two cases of general streptococcus infection secondary to erysipelas of the face and neck, and one of erysipelas of the arm, occurring in individuals with arterio-sclerosis. He had also had two cases of acute fibrinous aortitis, with general infection, due to the staphylococcus pyogenes aureus.

He said that in many cases of arterio-sclerosis and of chronic nephritis, especially in individuals upon whom surgical operations had been done, the primary seat of infection is in the colon and rectum, in the form of an acute colitis or proctitis. A few of these cases have acute peritonitis, with general infection by direct extension of the inflammation through the bowel wall.

He said that by far the greater number of the infections mentioned above as occurring in the subjects of arterio-sclerosis were due to the streptococcus pyogenes; some to the staphylococcus; some to a mixed infection with these two, and still others to the bacillus coli communis, with or without the presence of one of the other two organisms.

Of twenty-two non-operative cases of cancer of various organs, eleven, or 50 per cent. were various acute infections.

He divided the infections under consideration into two classes: (1) local infections confined to a special organ or part of such virulence as to cause death of themselves, as a pneumonia or a peritonitis; and (2) general infection or septicæmia. Many cases of the last class were secondary to primary infection of some organ or part.

These acute infections are due for the most part to the following organisms in the order of their frequency, the streptococcus, the pneumococcus, the staphylococcus, and the bacillus coli communis.

He said that in many of these cases the infection atrium could be easily found, while in others it is very obscure. In ulcerative tuberculosis of the lungs there is usually, sooner or later, a mixed infection with the pyogenic cocci at the seat of the disease, and these must in many cases find their way into the general circulation. When the process in the lungs is complicated with other chronic visceral lesions, particularly nephritis, general infection is especially liable to occur.

The organisms causing the pneumonias so frequently met with in the chronic diseases under consideration probably gain access to the lungs in the same manner that obtains for healthy individuals.

Many cases of general infection, in the subjects of arterio-

sclerosis especially, may be traced to leg ulcers and bed sores, and some cases to lesions of the intestines, as dysentery. In one of his own cases, dead of acute fibrinous pericarditis, in the exudation of which and in the various organs the bacillus coli communis was found, there were numerous large superficial ulcers, due to the pressure of hard masses of feces.

In many cases of general infection the starting point is to be sought for in the lungs.

In cases of cancer the infection atrium is probably almost always in the ulcerated surfaces of these growths.

But in a large number of cases the infection atrium cannot be discovered. We have reason to believe that bacteria frequently gain access to the circulation and to the tissues, and in these chronic diseases the normal body resistance is so lowered that infection readily occurs.

He said that the diagnosis of these cases is usually clear, but that a certain number of cases come to the autopsy table unsuspected. The larger proportion of cases, especially those in which the infection is focal in the lungs, show a rise of temperature, which may be sudden and high, and may last several days before death occurs. In some cases the temperature curve is very irregular. In some cases of very virulent infections in weak subjects the patient dies in a short time, with even subnormal temperature, there not being enough resistance left to show reaction to the poison. Such cases often have delirium, with or without suppression of urine. Often the first symptom noticed is mental hebetude and dullness.

Except in pneumonia or peritonitis, a well-marked chill is not commonly observed.

In an individual with a focus of chronic tuberculosis, the presence of an evening rise of temperature, chilly sensations, mental hebetude, abdominal pain, and progressive weakness almost always means general infection. When there is involvement of glands and joints, or signs of meningitis, the diagnosis is certain. Diarrhœa is not uncommon, but constipation is the rule. Examination of the blood nearly always shows an increase in the polynuclear leucocytes, which is marked in some cases.

In regard to treatment, he said that prophylaxis is of the greatest importance. When general infection occurs, the case is usually hopeless. The cardinal point is, when focal infections are discovered, to limit them as much as possi-

ble. He advised the free use of alcohol, strychnine and quinine.

Dr. Carter S. Cole, of New York, N. Y., read a paper entitled—

Depressed Fractures of the Skull—A Clinical Study, with a Report of Forty Operative Cases at Chambers St. Hospital, in the Service of Dr. Lewis A. Stimson.

He called attention to the difference between the "bursting" fracture, in which a large area was involved, with or without depression, and in which an operation did little good, and a "circumscribed" fracture, particularly with a wound present in which an operation was strongly indicated. He referred to the confusion often of the terms, depression and compression, and to the difficulty in differentiation, and quoted approvingly Dr. Phelps, who, in a recent contribution, said: "If they be discarded, the form of injury in a given case—as laceration, general contusion, or fracture with hæmorrhage—is more likely to be accurately determined than if attention be directed solely to a symptomatic condition that may not clearly exist." He then noted the facts that a limited hæmorrhage might occur as the result of trauma without fracture, either between the periosteum and bone, between the membranes of the brain and periosteum, or beneath the dura; that hæmorrhage by contrecoup was not infrequent; and that in any such cases operative interference was demanded. Moreover, that a fracture and depression of the inner table might occur without a fracture of the outer very rarely; the reverse not infrequently. The complete absence of symptoms often, even with extensive injury calling for operation, and the importance of a prompt determination of the conditions present, independent of the symptoms, by an incision if necessary, were next noted. He then showed how a careful enquiry into all the details of the injury might be of value; how pressure over the speech centre (where a considerable depression obtained) had evoked cries from deep coma and made a diagnosis possible; and how easily the diagnosis could be missed, even after an incision, if the periosteum was not divided, or if any other probe than the finger was relied upon. He then gave the technique of the operations for the relief of depression, laying especial stress upon the desirability of preserving as much bone as possible, and to this end using a chisel and not a trephine to free the depressed bone, and also upon the necessity for strict asepsis. He commended gauze drainage for three or four days, in-

frequent antiseptic dressings, and confinement to bed for ten days or two weeks at least. He then analyzed the cases reported, and showed that only one in which a fracture of the bone was not known to be present had proved fatal; and that this had so terminated from hernia cerebri following a considerable (possibly unnecessary) loss of bone. He called attention to the fact that the trephine had only been used in four cases; to the fact that symptoms were noted as being absent in fifteen cases, and doubtless were in several others. Anæsthesia, he said, had not been used in six cases; cocaine had been used in one case; ether in the remainder. The fact that thirteen operators had achieved practically the same excellent result encouraged the belief that an immediate determination of the exact conditions present, by an incision if necessary and without question with a wound present, the immediate elevation of depressed bone and removal of completely detached pieces, if small, and drainage, were not only easy, but practically obligatory. He then presented in detail a report of the forty cases.

Analyses, Selections, etc.

Fibroid Tumors of the Uterus.

Dr. Sutton, of Pittsburg, Pa., delivered the address on this subject before the Mississippi Valley Medical Association, in Indianapolis, October, 1893.

He took up the subject from its inception. The etiology, diagnosis, changes, treatment, medical and surgical, were fully discussed. In the treatment of small fibroids, which cannot safely be removed by the vagina, he advocated removal of the uterine appendages, excepting in cases of sub-peritoneal pediculated fibroids, or cases especially suitable for myotomy. In cases requiring hysterectomy, if the pedicle was to be left in the cavity of the peritoneum, he recommended Zweifel's method. In case an extra-peritoneal method was preferred, he advocated the original method of Pean, or as improved by Hegar, or the more recent methods of Byford, Baer, and Hall. In case it was desirable to remove the entire uterus, he explained and recommended the methods of Eastman, Krug, Polk and Mann. He credited Bordenheuer with being the first to recommend the entire removal of the uterus for fibroids. The address was lengthy

and as exhaustive of the subject as the time would permit. He believes and urged that all fibroid tumors required treatment. This is the result of ten years' experience since he wrote the article on fibroid tumors for the *American System of Gynecology*. He made no mention of electricity in the treatment of fibroids.

The Indications and Preferable Methods for Mastoid Operations.

Dr. Seth Scott Bishop, of Chicago, Ill., believes that the majority of surgeons are too conservative, both as to the time selected for surgical interference and the extent of the operation. He has seen fatal results follow, 1st, refusal to allow the operation; 2nd, after operations too long deferred; and 3rd, after operations that were performed too timidly to remove all the diseased tissue; but he has never known a death to occur as the direct result of the operation itself. The disease demanding this operation is far more dangerous than the proper surgical measures for its relief. Greater freedom of action and boldness of methods will add lustre to the records of our work. Dr. Bishop has formulated the following six rules (which he presented to the Mississippi Valley Medical Association, during session in Indianapolis, October, 1893), by which he has been guided in deciding when to operate.

The mastoid should be opened:

I. When there is acute inflammation of the bone that resists palliative treatment.

II. When repeated swellings and abscesses occur.

III. When there is bulging of the posterior and superior wall of the meatus with suppuration of the middle ear.

IV. When a foul otorrhœa cannot be cured by any other means.

V. When there is a fistula.

VI. When there are severe pains in the same side of the head as the diseased ear, resisting all other treatment.

His choice of an operation is generally Schwarte's, modified according to the exigencies of each case. Stacke's method leaves too extensive a wound surface, and it takes too long to heal. There is also a tendency to resulting stenosis of the external meatus that demands the use of supporting tubes or iodoform gauze packing.

Light reflected from a forehead mirror is preferred, and the wound is kept partly open with iodoform gauze until it heals from the bottom. Aristol is the best cicatrizant, and has soothing and anæsthetic properties.

Book Notices.

The Theory and Practice of Medicine Prepared for Students and Practitioners. By JAMES T. WHITTAKER, M. D., LL. D., Professor of Theory and Practice of Medicine, Medical College of Ohio; Lecturer on Clinical Medicine at the Good Samaritan Hospital, etc. *With a Chromo-Lithographic Plate and 300 Engravings.* 8vo. 840 pages. Extra Muslin, \$5.75; Leather, \$6.50. New York: Wm. Wood & Co. 1893.

This treatise is succinctly prepared, and is well up to the latest developments of doctrine. It is well arranged to impress the student with the specific germ theory of cause of disease—beginning, as it does, with sections on the ectozoa, followed by sections on the entozoa; then the bacterial diseases, etc. In all of its teachings, it is thoroughly practical, and, had it been issued in time, it would undoubtedly have become popularly adopted as a text-book in a number of the colleges this fall. For the practitioner, however, it is issued in time to furnish him with a most excellent work—the cause, diagnosis and treatment sections being, in general, specially well written. The author has taken a great deal of pains to show the practical value of the microscope and test-tube as aids in diagnosis as well as in the study of the causation of disease. The work is most unhesitatingly recommended to students as a first-rate text-book, and to the practitioner as being authoritative, practical in details, and well up to date.

Dictionary of Medical Science. *Containing a Full Explanation of the Various Subjects and Terms of Anatomy, Physiology, Medical Chemistry, Pharmacy, Pharmacology, Therapeutics, Medicine, Hygiene, Dietetics, Pathology, Surgery, Bacteriology, Ophthalmology, Otology, Laryngology, Dermatology, Gynecology, Obstetrics, Pediatrics, Medical Jurisprudence and Dentistry, etc.* By ROBLEY DUNGLISON, M. D., LL. D., Late Professor of Institutes of Medicine, Jefferson Medical College of Philadelphia. Edited by RICHARD J. DUNGLISON, A. M., M. D. New (21st) Edition. Thoroughly Revised, greatly Enlarged and Improved, with the Pronunciation, Accentuation and Derivation of the Terms. Imperial, 8vo. 1181 pages. Cloth, \$7; Leather, \$8. Philadelphia. Lea Brothers & Co. 1893.

During the past few years, a number of medical dictionaries have issued from the press; but to those familiar with "Old Dunglison," none of the new ones suited as well. It was, therefore, with special interest that we were on the watch

for the promised 21st Edition. We found it the same good old friend, in a new dress, but with many improvements in keeping with the advances of the past decade. Whatever is obsolete has been excised; and though the size of the page has been enlarged, it required about 100 pages more than its predecessor to give room to the 44,000 new words and phrases that have been added to medical literature in recent years. Pronunciation is explained by a simple, clear phonetic spelling. The derivation of words, which so greatly aids remembrance of meanings, is thoroughly given. The full definitions have been expanded to include much practical information. Thus, under Diseases, are given their symptoms and treatment; under Drugs, their properties and doses; under Poisoning, the symptoms, antidotes and treatment, etc. Among the numerous tables that add value to the book, that of Bacteria is very important. And thus we might go on enumerating other qualities that compel the expression that the 21st edition of *Dunglison's Medical Dictionary* is an indispensable book for all students concerned with any of the medical sciences. We have left the full title of the *Dictionary* in the heading of this notice because it well indicates its scope.

Editorial.

Southern Surgical and Gynæcological Association.

The Sixth Annual Meeting will be held in the Assembly Room of the Medical Department of Tulane University, New Orleans, La., November 14th, 15th, and 16th, 1893. St. Charles Hotel will be headquarters for the members of the Association. Regular practitioners are cordially invited to attend the session. All who attend should obtain from the ticket agent at the point of starting certificates that they paid full fare to New Orleans. These certificates, signed by the Secretary of the Association at New Orleans, will *probably* secure return tickets at one cent per mile. The Programme, just issued, is well filled with titles of papers of great interest to surgeons and gynæcologists by authors of generally recognized eminence in the profession. Dr. Bedford Brown, of Alexandria, Va., is President of the Association; Dr. Wm. E. B. Davis, of Birmingham, Ala., Secretary; Dr. A. B. Miles, of New Orleans, Chairman of Committee of Arrangements.

Medical. Society of Virginia.

We regret very much that a systematic report of the proceedings of the recent session has been crowded out; but as the *Transactions* "copy" is in the hands of the printers, and as some of the papers presented will appear in our December issue, members of the Society will not have long to wait. The meeting so near the University of Virginia was in itself a special attraction to many of the Fellows in attendance, whose College days were spent in its lecture halls. The Faculty manifested their appreciation of the session by numerous courtesies and hospitalities. So that the Charlottesville meeting will long be treasured in memory as profitable as well as pleasurable. The President-elect, Dr. Wm. P. McGuire, of Winchester, Va., had the rare compliment of being chosen without the suggestion of a competitor for the honor. The retiring President, Dr. Herbert M. Nash, of Norfolk, Va., frequently manifested his interest in the scientific proceedings by entering upon discussions of papers read—adding valuable information from his vast store of experience and well studied observations. The papers by the visiting doctors were all good and appreciated. The addition to the membership would have been much larger had not the financial depression, which has swept over the country during the past few months, prevented many from attendance. The 25th Annual Session, in the city of Richmond, during November, 1894, will be made a most inviting one; and it is hoped that Fellows everywhere will lend their help to the realization of a great success.

College of Physicians and Surgeons, Richmond, Va.

It will interest many of our readers to learn that this newly-organized College has already over 100 matriculates, representing several States. Since this success has so far exceeded even the most sanguine expectations, inquiries and promises have come, from all parts of the South especially, in such numbers as to determine the corporators to build additional lecture halls, etc., next spring so as to be prepared for much enlarged classes next fall. Such success shows that there was demand in the South for the *three years graded course*, as now adopted by the best institutions elsewhere. In fact, the laws of seven or eight States now require of applicants for license to practice in them that they

shall be graduates of Colleges of not less than three years graded course.

Just before the opening of the Session, Dr. I. H. White resigned his chair. Whereupon, Dr. Edward McGuire was elected Professor of Diseases of Women, and later, Dr. J. F. Winn (who is also Corresponding Secretary for the College) was elected Professor of Diseases of the Nervous System.

Dr. M. D. Hoge, Jr.,

Who has been of great service to practitioners of this city in determining diagnosis by chemical and microscopical examinations of pathological specimens, urine, sputum, etc., has decided to offer his services to the profession at large. The value of such laboratory analyses before deciding on diagnosis, prognosis and treatment in many doubtful cases, is sufficiently recognized by educated physicians and surgeons everywhere as to give us pleasure in announcing that so able and well equipped a pathologist has yielded to the persuasion of friends to offer his services to the profession. Beside his recognized expertness in this direction, Dr. Hoge's duties as Professor of Histology, Pathology and Urinology in the College of Physicians and Surgeons, Richmond, Va., afford him exceptional laboratory advantages for thorough microscopical and chemical examinations of morbid tissues, secretions, etc. See advertisement, page 9.

We much regret that want of space

Compels postponement of publication till December number of much "copy" prepared for this issue.

William R. Warner & Co., of Philadelphia,

Have obtained the highest prize for the purity and perfection of their medicinal and officinal standard pharmaceutical and chemical products. This extensive firm have obtained hitherto twelve grand World's Fair prizes, and they must feel deservedly proud of the Columbian award, which is the highest of its class.

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Original Communications.

ART. I.—Insanity—Its Relation to the Public and the Profession.*

By R. J. PRESTON, M. A., M. D., of Marion, Va.,

SUPERINTENDENT SOUTHWESTERN LUNATIC ASYLUM, MEMBER VIRGINIA STATE BOARD OF HEALTH, ETC.

Insanity, it has been truly said, is a scientific problem difficult of solution in all its phases. It is also a social problem, taxing the body politic with ever-increasing burdens financially, and constantly appealing to the humanity and Christianity of our race. Hence, its discussion is of deepest interest to us all, as citizens as well as physicians.

In this paper it will be my purpose not to elaborate upon the various forms (so-called) of insanity—(e. g., mania, melancholia, dementia, paresis, etc.). Neither shall I, in considering the brain—the seat of insanity—attempt to describe in detail its complex and beautiful structure, “buttressed and bastioned as it is within its rock-ribbed walls, seemingly defying scrutiny into its 1200 million cells of gray

* Read before Medical Society of Virginia, Charlottesville, Va., October 5, 1893.

matter alone, and its other intricate labyrinthian recesses," so graphically described by our distinguished Hon. Fel. Dr. W. W. Parker; nor shall I at present review the many successful researches constantly being made as to the localization of nerve centres; but shall limit myself strictly to the subject, and endeavor to present a practical view as to the nature of insanity and its relations to the public and to the medical profession.

In doing this, I shall quote most liberally from distinguished authorities and text-books, and desire to here make due acknowledgment of the same.

In the first place, then, *What is insanity?*

Much confusion is produced in the mind of the laity and of the medical profession generally by the terms insanity, mania, monomania, melancholia, etc., being used as so many different diseases, whereas they are expressive only of symptoms or "groups of symptoms."

"Dropsy is no longer considered a disease, but only a symptom of several different diseases." So insanity is not a disease, but a symptom of several different diseases. Insanity is, literally, "unsoundness of mind." "Mind may be defined (Maudsley) physiologically as a general term, denoting the sum total of those functions of the brain which are known as thought, feeling, and will." By disorder of mind is meant "the disorder of these functions."

Mental diseases are brain diseases; but while the brain is undoubtedly the seat of insanity, it is not necessarily the seat of the cause. Insanity may be idiopathic or symptomatic—*i. e.*, either in the brain or out of the brain. Hence, the many discussions of these various psychoses and psychoneuroses in the elucidation of so-called cerebral and somatic psychology.

Where else than in the brain can insanity arise? Blood poisoning, Bright's disease, phthisis, diseases of the blood, or derangement of its circulation, are some of the chief causes of extra-cerebral insanities. But with all the myriad reflexes and connecting causes we find, unfortunately, that in many—if not the majority of cases—it is utterly impossi-

ble, in the present state of psychological research, for any one to unravel the knot and assign definitely or absolutely the prime cause or causes of these maladies. "The majority of symptoms of insanity are merely excesses, or deficiencies, or perversions of functions."

The brain is a complex organ, or, in other words, "there is within the cavity of the cranium, a number of organs, capable, more or less, of acting independently of each other."

"The proper function of some portions of the brain is essential to existence; but not so with the mental portion, as patients may live with unsound minds during the whole term of a natural life."

Bucknell describes insanity as "a condition of the mind in which a false action of conception or judgment, a defective power of the will, or an uncontrollable violence of the emotions and instincts has been separately or conjointly produced by disease."

Tuke says: "Insanity consists in morbid conditions of the brain, the result of defective formation or altered nutrition of its substance, induced by local or general morbid processes, and characterized especially by non-development, obliteration, impairment, or perversion, of one or more of its physical functions."

Maudsley's definition: "Insanity is disorder of brain producing disorder of mind or disorder of the supreme nerve centres of the brain—the special organs of mind—producing derangement of thought, feeling and action, together or separately, of such a degree or kind as to incapacitate the individual for the relations of life."

Hammond: "Insanity is a manifestation of disease of the brain, characterized by a general or partial derangement of one or more faculties of the mind, and in which, while consciousness is not abolished, mental freedom is weakened, perverted, or destroyed."

Spitzka says: "Insanity is either the inability of the individual to correctly register and reproduce impressions (and conceptions based on them) in sufficient number and intensity to serve as guides to actions in harmony with the individual's age, circumstances, and surroundings, and to limit himself to the registration as subjective realities of impressions transmitted by the peripheral organs of sensa-

tion; or the failure to properly co-ordinate such impressions, and to thereon frame logical conclusions and actions; these inabilities and failures being, in every instance, considered as excluding the ordinary influence of sleep, trance, somnambulism, the common manifestations of the general neuroses, such as epilepsy, hysteria, and chorea, of febrile delirium, coma, acute intoxication, intense mental pre-occupation, and the ordinary immediate effects of nervous shock and injury."

He further says: "Insanity is a term applied to certain results of brain disease and brain defect which invalidate mental integrity."

"It is inaccurate to state that insanity is itself a disease; it is, strictly speaking, merely a symptom which may be due to many different morbid conditions."

H. C. Wood, in his work on *Nervous Diseases*, writes: "Insanity being a symptomatic condition, and not a disease, it is illogical to consider different forms of it as distinct diseases; the best that can be done is to describe the diseases of the brain and the insanities that accompany them, so far as we know such diseases, and when our knowledge of disease fails, to describe forms of insanity, not as diseases, but as 'symptom-groups.' Naming these symptom-groups naturally leads to the delusion that these groups are diseases; hence melancholia, mania, etc., are constantly written about as though they were terms of equivalent force to typhoid fever or scarlatina, whereas they are simply of the same rank as diarrhœa or paralysis."

Savage says: "Insanity is a relative term." * * * * *

"Sanity and insanity are but terms of convenience." * * *

"No person is perfectly sane in all his mental faculties any more than he is perfectly healthy in body."

"Sanity and insanity, then, are to be measured by differences or changes of habit, taste, and disposition, in the individual; as well as by other symptoms of change in the nerve-centres." * * *

"The consideration of mental disorder can only fairly be approached by the complete consideration of general physiology—i. e., the development, growth and decay of the body in all its parts."

"Insanity may depend on vices of development, vices of growth, or premature degeneration, local or general; but may depend also upon the bad ministration of 'the servants of the brain;'" for as an old writer has said: "The brain

like a gentleman, has many servants, but, with all, may be badly served."

Blandford, one of England's most distinguished alienists, says: "Insanity or unsoundness of mind may exist by itself, the bodily functions being apparently intact; it may be coupled with apoplexy, epilepsy, and other cerebral affections; or arise in the course of such diseases as measles, pneumonia, acute rheumatism, and fevers of all kinds; or may be traced to blood poisons, to alcohol, haschisch, or opium. Whether we call it delirium, coma, wandering, or idiocy, mania, melancholia, or dementia, it depends on some pathological condition of the nerve-centres, and implies a total or partial mental alteration or defect."

From the above considerations as to the nature of insanity, collected hurriedly from some of the most distinguished alienists of this country and Europe, the feature clearly set forth, and which I wish to impress at this time, is that, while the brain is the seat of insanity, and its study and investigation must embrace a thorough comprehension and scrutiny of this organ, yet it cannot be limited here; but, like all other specialties (so intimately associated and dependent upon each other are all parts of the body) it must, for its thorough understanding, embrace the study and scrutiny of every part of the body. These functional impairments or perversions of the mental portion of the brain are so often dependent upon extra-cerebral causes as to necessitate this. As has been truly said: "This artificial separation of 'diseases of the mind' from 'diseases of the body' has hampered science, and has prevented advance in the study of those forms of disease in which mental alienation is the most prominent, but by no means the sole, or even the most important symptom."

"*Mens sana in corpore sano*" is a scientific axiom, accepted in theory, but too often ignored in practice, which embraces in a nut-shell the necessary conditions of healthy brain action.

The Relations of Insanity to the General Public.

This is a social problem of much importance, and should elicit the attention and earnest thought of every thinking citizen, and especially of our wisest statesmen.

While mental diseases are subject to the same laws as to cause and effect as other diseases, and for the most part as to treatment, yet they are unlike all other diseases in this, that the obliteration or perversion of the controlling power of thought and action gives rise often to conditions dangerous to life and perilous to society, and necessitates often for proper treatment a deprivation of personal liberty, essential to the patient's well-being, and that of the public.

Hence, laws regulating these conditions are upon the statute-books of every State in the Union, and from time to time demand the most thoughtful consideration of legislative bodies; and various amendments and revisions are suggested and brought forward at each successive Legislature in this and other States. But to be brief, in the opinion of the writer, no State has approached nearer to the perfection of a system of laws regulating these conditions than the State of New York. The Lunacy Commission there, under the leadership of that eminent alienist, Dr. McDonald, who has devoted a life time to earnest, faithful work in this specialty, has done much, and is still doing much, in bringing about uniformity of methods and systems which not only tends greatly to the benefit and amelioration of this afflicted class, but also to the advancement of science. Other States are following the example and doing much in the way of revising and perfecting their lunacy laws and bringing them more into accord with the later and more humanitarian teachings of medical science in this specialty.

Virginia, grand old Commonwealth, is accorded the honor of having built the first asylum for the insane in the United States, and may she ever in the future, as in the past, be in the vanguard of that noble army of workers in the cause of humanity and Christianity.

It is the *Relation of Insanity to the Medical Profession* to which I desire chiefly to direct attention.

That eminent alienist, Dr. Blandford, says: "If there is one branch of the great study of medicine which more than another deserves to be called an art and a mystery, it is the treatment and investigation of insanity." The treatment

is an art in which, as in surgery and midwifery, practice and clinical instructions are important, if not necessary, to the attainment of skill. In the last quarter of a century, during which the theory of physical disease as the basis of insanity has prevailed, there has been a great and rapid advance in our knowledge of the pathology and treatment of diseases of the mind, so as to place them beyond the pale of mystery and on the same footing with other diseases, to be treated on the general principles of common sense and medical science." Is it not true, however, that the medical profession generally, as well as the laity, stand aghast and helpless in the presence of these disordered mental manifestations, and too often shrink from personal contact and personal responsibility in these cases?

"There are diseases treated of in general medicine and lectured on in all medical schools (as hydrophobia, cholera, yellow-fever, etc.,) which the general practitioner may never be called upon to treat; but few, if any, will pass through many years of general practice without being brought face to face in a most trying and responsible way with some phase of insanity.

"Your puerperal, your medical, and your surgical cases may develop into violent mania; and in crimes committed, in wills contested, etc., you may be forced to testify in court as to the sanity or insanity of your patient.

"You cannot escape from this any more than from other duties of the profession. The mental as well as the bodily health of your patients must be your care from infancy to old age in all the growth, development, and decay."

The inmates of all our asylums are there, for the most part, held in restraint upon the certificates of medical men. This involves a very responsible duty—one in which the physician may be amenable to the law, and one in which vital and important interests of the patient may be involved.

It is often one of the most difficult and trying responsibilities, if properly considered, for the physician to give an opinion as to the sanity or insanity of his patient, and

when pronounced insane to determine as to home or asylum treatment.

In view of the very great importance of *proper treatment* in the early stages of these mental troubles this becomes a vital question.

Some cases can be better treated at home, but when delusions and antipathies are formed in connection with home and home people, as so often is the case, a removal from these scenes is of first importance.

But it is especially as to the premonitory stages of insanity—the prodromal or border-land symptoms—so to speak—the prevention and correction of these physical and psychical abnormalities in their earlier and formative periods, that the general practitioner has most to do. He it is that must first recognize these tendencies, and by proper moral hygienic and therapeutical remedies ward off the impending danger. As before said, the mental and bodily health of his patient should be his constant care from childhood to old age. “We are admonished to study the child of neurotic parents to restrain its precocity to see that it develops biologically, not artificially, to make it first a good animal remembering that citizenship comes later.”

It has been truly said that the most important interest of the child can best be looked after before its birth. The correction of neurotic tendencies in the parents; the careful study and adoption of the most favorable measures for the child's welfare before, during, and after birth; the avoiding and correcting abnormal depressions or shaping of the infant skull; the careful attention and advice as to uniform development of mind and body in youth; the earnest warnings as to improper marriages among families of neurotic temperaments—all these come within the sphere of the general practitioner, and much can be done here by the wise, faithful, family physician in the way of lessening hereditary tendencies—the most prolific of all causes in the production of insanity.

An eminent alienist says “the earlier emotional overstrain, harsh treatment, sensational reading, and ambitious

rivalry occur in the history of mental development, the more likely are they to awaken the slumbering predisposition to insanity where it exists, or to develop it where it does not exist. The most important task of the alienist of the future (and I will add of the general practitioner also) will be a thorough revision of our educational methods."

Insanity should be included among the branches of study in every medical school. In the days of the Greeks, psychology was recognized as a department of medical study.

In Great Britain the Medical Council has made didactic and clinical instructions on these subjects obligatory in all the medical schools.

As far back as 1871 the American Medico-Psychological Association recommended "that in view of the frequency of mental disorders among people of all classes, and in recognition of the fact that the first care of nearly all these cases necessarily devolve upon physicians engaged in general practice, * * * in every school conferring medical degrees there should be delivered by competent professors a complete course of lectures on insanity, and on medical jurisprudence as connected with disorders of the mind." This was reaffirmed by the Association at their meeting in June last.

According to a recent investigation by Dr. Andrews, of the Buffalo State Hospital of New York, there are now about 67 per cent. of the medical colleges of the United States and Canada that furnish their students educational facilities in this specialty. In many of these, however, the study is voluntary and not made compulsory, as it should be, by examination upon the subjects taught.

In all the medical colleges of New York lectures are delivered upon this subject, and in most, clinical advantages are offered. The Lunacy Commission of New York has recently authorized the introduction of medical students under proper restrictions into the wards of the various State hospitals for the insane.

Our own excellent medical schools here at our noble State University and at the capital in Richmond, should

take advantage of their facilities for clinical material in the nearness of the Western, Eastern, and Central asylums, and awaken an increased interest in these important psychological studies, and do efficient work in the elucidation of these intricate psychological problems.

To this end, also, there should be a central pathological laboratory, thoroughly equipped and under the charge of a skilled pathologist, to whom, as in New York, could be sent for examination and investigation pathological specimens of complex and interesting cases occurring in the different hospitals for the insane.

Upon the subject of treatment I have said but little. Apart from general medical treatment of bodily symptoms as needed, and which is of great importance, it may be accepted as a dogma of psychiatry that these marked mental manifestations can be influenced by drugs only to a limited extent.

It is here that mental, moral, and hygienic treatment can accomplish much in the way of diverting and occupying the mind, or drawing it out, so to speak, by every available means, from that all-absorbing introspection so commonly met with in many of these cases.

As has been said, "everything constituting the environment in these cases—your conservatories, your birds, your flowers, your farm, your garden, the personal qualities of the nursing and medical staff"—can all be made contributory in many cases to successful treatment.

In presenting this imperfectly-prepared paper, I shall feel that my object is accomplished, if I can awaken in the medical profession an increased interest in this subject. I desire, also, to awaken an interest in this afflicted and most helpless class of our citizens, "many of whom having contributed their proportion to the prosperity and advancement of the State, are now rendered unserviceable by no fault of their own," but, stricken in God's providence by disease; they are not paupers in the true sense of the word," but they are proper claimants upon the State's bounty, and worthy objects of humanitarian and Christian effort.

ART. II.—Abortion in the Earliest Weeks—Its Treatment.

By CHARLES H. BUSHONG, M. D., of New York N. Y.

ASSISTANT GYNÆCOLOGIST TO DEMILT DISPENSARY, ETC.

Abortion is so frequently the cause of chronic pelvic disease that its correct treatment is of the utmost importance. This is equally true when occurring in the early stages of pregnancy as when the pregnancy is more advanced. It is probable that more cases of interrupted gestation are followed by sequelæ, that occur before the the third month, than after that period. When this interruption is at any time during the early weeks of pregnancy, its importance is rarely appreciated by the patient. She will usually not know that she has aborted unless the excess of blood lost, or the pain or prostration causes her to call a physician. If the latter is not alert, he may also be misled and believe with his patient that the flow of blood is only a delayed menstruation. Women are prone to attribute the failure to menstruate to "cold," or other results of indiscretions, and it is easy to fall in with their reasoning and believe they are right in their conclusions. This mistake is more readily made when the woman is unmarried. The possibility of pregnancy should never be overlooked in any case where the patient has missed a week or more over her usual period and then loses an unusual amount of blood. Of course it is not always wise to voice such a possibility to the patient or her friends. The danger of suspecting an innocent girl should always be in the mind of her medical attendant. Yet he should never let his confidence in her chastity throw him completely off his guard, or he will surely meet a case that he will treat improperly because of being led by this confidence to overlook the real condition present.

It is this class of cases of *abortion occurring in the very earliest weeks* that will be considered here. The importance of their appreciation is frequently overlooked by the general practitioner, and they do not come to the specialist until the injury has been done. When the condition present is known

the correct treatment is often not given and the consequences follow.

In my private or dispensary practice, it is an almost daily experience to meet a new case of advanced disease of the uterus and its adnexa, which, from the history elicited, can be clearly traced to an abortion. Many times the fact that she had aborted was not known to the patient herself. She will be perfectly honest in her answer when she says she never miscarried; yet, on further questioning, it will be learned that she went five, six, or more weeks without menstruating; that this interval was followed by a profuse discharge of blood with more or less pain and clots of blood; and that all her symptoms for which she applies for relief date from this time. She may have been in bed only a day or two, or she may have had to remain there a week or more. The hæmorrhage may have been only slightly more than a usual menstrual flow, or it may have been enough to blanch the patient from the loss of blood. In the latter case, she will more frequently have called a physician at once. The fact that the patient may be ignorant of the true condition makes careful questioning important in getting her history. Considerable patience and ingenuity is needed to learn the true facts.

The consequences of these untreated or improperly treated abortions are serious. The first result is that the retention of placental or fetal fragments prevent involution, and this is followed by metritis. The metritis is at first confined to the endometrium, but will eventually involve the entire body of the uterus. If there is laceration or other injury or disease at the cervix, it will participate in the inflammatory process and be aggravated by it.

The various ways in which the appendages may become diseased as a sequel of metritis, either puerperal or gonorrhœal, I have described at length elsewhere.* The septic poison reaches the tubes by one of these ways, and a pyæmic salpingitis is the result. This inflammation of the Fallo-

* Page 302.—Modern Gynæcology. 1893. E. B. Treat, New York.

pian tubes causes the symptoms which usually bring the patient to seek relief. The metritis and its menorrhagia may be sufficient to cause her to seek advice before the tubes are involved. This is more liable to be the case in private than in dispensary practice. Patients of the former class seek advice sooner than the latter, and find relief before so much injury has been received. These women can usually be cured without mutilation. Those whose tubes are filled with pus must consent to their removal, or be more or less of invalids for many years, perhaps for life. The metritis may cause a pelvic peritonitis, which is a serious complication. This is more common after the tubes have been infected, but it is by no means uncommon for the pelvic peritoneum to be involved directly from the uterus.

From the above facts it is evident that immediate and proper treatment of abortion is of the utmost importance. The treatment may be divided into three classes according to the stage in which the patient is seen. If seen early enough, the first thing to do is to attempt to prevent the abortion and check the tendency to expel the fœtus. This should always be done when possible. When the condition is such that all hope of saving the fœtus has passed, or when the symptoms are dangerous to the mother, everything must be done to expedite its expulsion. The third class of cases is found when the fœtus has already been expelled and the patient is suffering from the consequences of retained placenta, etc., or from hæmorrhage as a result of their presence. Each of these will receive separate mention.

To prevent an abortion is the physician's first thought, and should be his first duty. While there is any chance to do so, other measures should be postponed. The time in which this can be safely attempted is early, and usually of short duration. If a successful result is to be obtained, the treatment must be prompt.

Probably the most used remedy for this purpose is *opium* in full narcotic doses. It requires the closest watching to

avoid too pronounced action of the drug, and yet it must be used in large doses to be efficient. The powdered opium in pill form is most satisfactory. The dose will vary from a half grain to two grains, as the patient will bear. It should be continued for two or three days in diminished doses until all tendency of the uterus to expel its contents shall have disappeared.

Where there is considerable hæmorrhage, and yet reason to believe the fœtus is still alive, some hæmostatic is also required. *Ergot* in small doses, either with or without *hydrastis*, can be used at this time. These drugs usually act best together. The dose should be sufficient to induce some contraction, or rather tension, in the muscular fibres of the uterine wall, but not enough to produce expulsive contractions. A dose of from five to fifteen, or even twenty drops of each of the fluid extracts of these drugs combined is usually sufficient to control the hæmorrhage. The best results will follow the use of the smaller doses repeated at frequent intervals. Half a minim of the fluid extract of each drug, well diluted in water, can be given every ten or fifteen minutes for the first few hours. The desired result can often be obtained in this way with the use of a much smaller amount of medicine than by the use of larger doses at longer intervals. The stomach is less liable to be upset by this plan, and careful watching will enable the physician to stop the medicine when the hæmorrhage ceases, and thus avoid the danger of using more than is needed.

Quinine has been more satisfactory with me than either ergot or hydrastis. It has many advantages in these cases. It can be given with the opium, but not in the same prescription or mixture. The sulphate used in the form of a pill is best. It is given in one grain doses every hour until cinchonism is produced or the hæmorrhage is controlled. Each dose is followed by an ounce or more of water. An idiosyncrasy of the patient may interdict the use of this drug if she is one in whom its bad effects are pronounced. Others may require a larger dose to get its effects. This "personal equation" must always be taken into account

when giving any drug, but quinine is probably more influenced by it than most drugs.

Absolute rest is a most important element in the preventive treatment of abortion. The patient must remain in bed, and absolute quiet enjoined until all danger is passed. The room should be darkened, and every one kept out of her hearing except the nurse and physician. It must be remembered that women frequently desire to have the pregnancy terminate. When this is the case, careful watching is required to prevent her from disobeying the physician's directions for the purpose of frustrating his efforts to preserve the life of the foetus.

Too frequent examination of the uterus through the vagina is calculated to disturb the pregnancy and lead to the death and expulsion of the foetus, and consequently should be avoided.

When it has been decided, after careful observation of the symptoms, that the abortion is inevitable, the line of treatment is entirely changed. When the woman is in an advanced stage of phthisis or other wasting disease, or has symptoms of nephritis, or where the vomiting produced by the pregnancy endangers her life, it is also advisable to desist from efforts to have her retain the foetus. If the foetus is already dead, its removal must be accomplished without delay. In this second class of abortion cases, the treatment is more surgical than medicinal. While the methods used may differ, the object of each is the same. It is the removal of the contents of the uterus as soon as possible. There should be no half-way measures, and the patient is not safe from sequelæ until every particle of the foetus and secundines have been radically removed from the uterine cavity. It is not enough to *suppose* everything has come away. The physician must *know* that such is the case.

The possibility of the first class of cases becoming the second is one of the advantages of quinine as a part of the preventive treatment of threatened abortion. The well-known action of this drug as fortifying the system against septic poisoning makes it of value now. Combined with

this fact is its action as a hæmostatic and as an emmenagogue. Larger doses at wider intervals are indicated when quinine is used in conjunction with other measures in treating these cases. Ten or fifteen grains should be given two or three times in each twenty-four hours for a day or two.

The removal of the uterine contents is accomplished in several ways. Perhaps the one most in use is the *tampon*. When this is used, the vagina is packed thoroughly, so that no blood can find exit through the packing. There must be a discharge of blood from the cervix in order to accomplish anything by tamponading. Damming back of this blood by the tampons fills the uterus with this fluid, and causes that organ to contract forcibly upon its contents, thus expelling everything into the vagina. The contractions may be so forcible as to expel the entire mass, tampons and all, from the vagina. This is not usual. The fœtus and placenta, if the latter has formed, are usually found in the vagina when the cotton is removed. The tampon can be left in for about twelve hours. It should be removed by the physician himself. If it should come away before his arrival for that purpose, he should leave instructions that everything passed should be saved for his inspection. This will enable him to satisfy himself that the contents of the uterus have all come away.

The above-described method of removing the uterine contents will be preferred by men who do little surgical work. The surgeon will find many reasons to be dissatisfied with it. The following are a few of his objections to the tampon when used in this connection :

In the first place it is uncertain. Cases are frequently met in which there is not enough fluid discharge to cause the uterus to contract when its exit is stopped. This is more liable to be the case when the fœtus has already come away with some clots. These are often thrown away before they can be inspected by a person competent to decide what they contain. Some of the fœtal envelopes and the placenta may yet be in the uterus, and it is impossible to learn how much

or little without an exploration. It would be unfortunate to pack such a case, and especially bad if there was pyæmic germs already in the uterus. The damming-up process would mean almost certain infection of the appendages and very probably a general pyæmia.

Again, when the tampons are used it is often difficult to be sure that everything has come away. If the interior of the uterus is not explored, it may contain a few small pieces of placental tissue adhering to its wall at some point. The gynecologist soon learns how small a mass is required to prevent involution and produce metritis and its sequelæ. It would seem as if a mass no larger than a pin head could form a focus from which the entire endometrium could be infected.

The danger of penning the blood within the uterus and causing enough of pressure to force it back into the tubes, and through them into the general peritoneal cavity, is not great. Yet such a thing is possible and should be thought of. The main point, however, in favor of instrumental removal of everything from the uterus after it has been decided upon, is the fact that it is necessary to put instruments into the uterine cavity after the other methods, in order to be sure of success. Such being the case, why delay? There is danger in every hour. The immediate instrumental method avoids delay; the physician can select his time and have such assistance and instruments at hand as he may need. It can be employed with less danger to the patient both from sepsis or consequences of injury, and she suffers less from pain and suspense.

When it has been determined to evacuate the uterus, it is best to go about it like any other operation, with all the details as to preliminaries, etc., attended to. This includes an appropriate room properly lighted, and free from possibility of contagion. This can be secured in almost any house. I have accomplished it even in a New York tenement house. In country houses, little difficulty will be found in securing a suitable room. Next is an appropriate table, which must be large enough to hold the patient when

in Sims' position. Clean linen for the patient, and the bed she is to occupy should be secured before the operation—not left until after it is finished. An abundance of clean towels, China basins, and boiling water will complete the list of things to be supplied at the house. The surgeon will bring with him absorbent cotton and instruments, and one or more assistants. One is sufficient, if a nurse or other competent woman is present.

The patient should be etherized and placed in the Sims' position. A Cleveland self-retaining speculum is then introduced and the strap fastened to hold it steady with the cervix in full view. The cervix is then seized with a double tenaculum and drawn down to the vulva. *The tenaculum must not slip.* Skene's double tenaculum is my favorite instrument for this purpose.

If the cervix is dilated sufficiently to admit the instruments no dilator is needed. In many cases, the opening in the cervix is small and the cervical walls rigid. This narrow canal prevents the uterus from emptying itself. It must be overcome before the uterine contents can be removed.

To dilate the cervix in these cases, two dilators will produce better results than one. The instrument of Sims, as modified by Wylie, is used to begin the dilatation. Its peculiar shape is especially adapted to getting through a bent cervical canal. The blades should be turned so as to cause the force to act in a number of different directions. The force used must not be sudden or spasmodic, but a firm continuous pressure, gradually increased. The narrowness of the blades makes the instrument liable to cut the tissues if the dilatation is carried too far with it. On this account, and because of its greater power, the instrument invented by Professor Wathen is the best to complete the divulsion. Its blades are wider, and, consequently, less liable to cut. More force can be exerted with this dilator than any other except Goodell's, and it is much more easily kept aseptic than the latter instrument.

After a patulous canal has been secured, the evacuation of the uterus is usually a simple process. If the fœtus or pla-

centa is yet within the womb, some kind of forceps is needed for their removal. An ordinary ovum forceps will answer every purpose. When an ovum forceps is not at hand, Bozeman's dressing forceps can be used. I have removed many with this instrument. When all the large pieces have been removed with the forceps, a blunt curette should be passed over the entire endometrium to detach any adherent particles.

The next step is the cleaning of the cavity. The intra-uterine douche is frequently employed for this purpose. I find it more convenient, and have better results from mopping out the uterus with absorbent cotton. Small pieces of the cotton are grasped in the blades of the dressing forceps and then dipped in hot water. (The water should be 120° F.) "A slight squeeze with the hand will expel the water so it will not drop. The wet cotton is then introduced into the womb, and the mucous membrane is thoroughly cleaned. Every time the cotton is removed from the interior of the uterus, it is rejected, and a fresh piece taken. This is again dipped in hot water and the whole process repeated until the cotton returns free from stain or detritus.

An applicator wrapped with cotton is then saturated with a solution of carbolic acid, diluted one-half with glycerine, and the endometrium is again gone over with this. Care must be taken to prevent the solution from coming into contact with the mucous membrane of the vagina or the vulva, or painful burns may be produced.

The uterine toilet is now completed. The vagina is then thoroughly cleansed with larger pieces of absorbent cotton, grasped in the forceps, and saturated in hot water, the speculum removed, and the patient washed and carried to bed. I might add, in parenthesis, that I have rejected the sponge for these cases. The sponging is all done with absorbent cotton, and no risk from foul sponges is taken.

The after-treatment of an abortion case is not dissimilar from other cases of operation through the vagina. It con-

sists chiefly of cleanliness and rest in bed, with careful watching for symptoms.

The diet should be very light for a few days, with the use of fluids chiefly for a week or more, to be gradually replaced by the usual regimen as health returns.

I find quinine sulphate in five-grain doses, three times daily, has a good effect in puerpural cases. It has displaced ergot entirely in my obstetric practice, and is more satisfactory. Its action on the uterus is good, and its presence in the system is an added safeguard against the entrance of sepsis.

If there is any tendency to a pelvic peritonitis, hot douches to the vagina must be given every two hours. If the drainage through the cervix is perfect, this complication will not occur. Should the cervix close, an Outerbridge drain should be introduced and left in. The hot douches should be used three times in each twenty-four hours for a week as a routine treatment, and then night and morning for two weeks more. They should always be given with the patient recumbent.

If pelvic inflammation sets in, it can be allayed by the use of a saturated solution of Epsom salts. This should be given in from two to four teaspoonful doses, and repeated every half hour until a thorough catharsis is secured. This purging must be repeated daily until the symptoms subside. The fever is controlled by the quinine, the dose of which can be increased to ten grains if required.

Care is necessary to prevent the patient from leaving her bed too soon. She should recline at least two weeks, using a bed-pan when needed. The nurse should be cautioned not to let her raise herself to have the bed-pan put beneath her. She should be lifted for this purpose every time.

If all cases of abortion were treated in the way above outlined, we would see fewer women with diseased appendages, the treatment of which so frequently requires mutilation to cure, or years of treatment and chronic invalidism while waiting for the menopause to relieve.

59 West Nineteenth street.

**ART. III.—Recent Observations of Croupous Pneumonia, with
Special Reference to Prophylaxis and Treatment.***

By RUSSELL M. CUNNINGHAM, M. D., of Ensley, Ala.,

FELLOW SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION, OF THE TENNESSEE,
GEORGIA AND ALABAMA TRI-STATE MEDICAL ASSOCIATION, AND
JUNIOR COUNSELOR OF MEDICAL ASSOCIATION OF
ALABAMA, ETC.

The object of this paper is to present a summary of facts obtained from the observation of ninety-three cases of croupous pneumonia at Slope No. 2 Prison, operated by the T. C. I. & R. R. Co. at Pratt Mines, Ala.

These cases developed—February, 3; March, 3; April—first week, 3; second week, 4; third week, 8; fourth week, 5; two last days, 2; May—first week, 14; second week, 31; third week, 13; fourth week, 6; three last days, 1. Thus, from a few cases in February and March, we have an epidemic, fully developed by the middle of April, reaching its maximum in the second week of May, declining in the third, and ending with the month.

I have prepared a table of these cases, from which I obtain the following data. Before discussing them, however, that you may know something of the hygienic condition of the prison, the number, roll, etc., of the convicts, I will briefly call your attention to the important points in these respects.

1st. The convict population: White, 75; negro, 425. Total, 500. This is approximately correct, with the exception of about six or eight. These are all males, and are employed in mining coal and at work incident to mining. They are assigned, in the main, to such work as they are physically and mentally fitted for, and are classed accordingly.

2d. The hygiene of the prison: The prison is well-located; it has four wings, arranged in the shape of a T, two of them being parallel, but several feet (25) apart. Each wing

* Read before the Tri-State Medical Society of Alabama, Georgia, and Tennessee, October 18th, 1893.

is two stories. There are thus eight dormitories, six being used for confinement, and two for chapel and dining room. Each of these is 130x30x12 feet. The average cubic area is near 500 cubic feet. Ventilation good. The convicts sleep on swinging bunks. The water-closets are annexed to the prison by means of a narrow "man-way," which is guarded by two doors. The plumbing is in accordance with modern specifications. Warm water in a warm bath-room for bathing. This prison, in a word, so far as hygiene and appointment are concerned, is good. The convicts are well-fed, clothed, and not over-worked.

The following analysis is based upon 92 cases of croupous pneumonia, the record of one having been lost:

Total number of cases, 93, or 18.60 per cent. of population. White, six cases, or 8 per cent. of white population. Negro, 87 cases, or 20.47 of negro population.

Age.—20 years and under, general average, 25.33+, pneumonia cases, 19.56.

20 to 30 years, general average, 47.97, pneumonia cases, 60.87.

30 to 40 years, general average, 14.28, pneumonia cases, 14.13.

40 to 50 years, general average, 5.92, pneumonia cases, 3.26.

Over 50 years, general average, 4.84, pneumonia cases, 2.17.

Class.—1st class, 19, or 23.45+ per cent. of the first class, men.

2d class, 23, or 19.65+ per cent. of the second class, men.

3d class, 28, or 20.29 per cent. of the third class, men.

4th class, 16, or 28.07+ per cent. of the fourth class, men.

11.00 class, 6, or 15.38 per cent. of the 11.00 class, men.

Kind of Work.—(a) Mines: Cut coal, 23; load coal, 35; tramming, 7; miscellaneous, 9. Total, 76, or 18.75+ per cent. of those that worked in mines.

(b) Outside: Miscellaneous, 17, or 17.89+ per cent. of all outside convicts.

Character of Invasion.—Sudden, 41; slow, 23; intermediate, 28. Violent, 25; mild, 48; intermediate, 19.

Symptoms.—(a) Digestive system: Vomiting, 11; constipation, 41; diarrhœa, 5; indifferent, 46.

(b) Circulatory: Good, 13; fairly good, 43; faint and weak, 28; pulseless, 3.

(c) Pulmonary: Cough, 52; no cough, 28; not recorded, 12; bloody sputa, 23.

(d) Nervous system: Delirium, 5; pain in side, 50; pain in head, 36; miscellaneous pains, mainly in limbs, back, etc., 36. All more or less prostrated.

Appearance of Physical Signs.—First day, 35; second day, 40; third day, 11; fourth day, 4; fifth day, 1; seventh day, 1; negative, 1.

Location and Area of Pulmonary Inflammation.—Both lungs entire, 23; part of both lungs, 17; single, 52. The two last as follows: Entire right lung, 15; upper lobe of right lung, 15; lower lobe of right lung, 28; entire left lung, 8; upper lobe, 3; lower lobe, 17; no pulmonary inflammation, 1.

Complications.—Acute osteo-myelitis: Hip joint, 1; of shoulder joint, 1; phlegmonous abscess, 3; acute arthritis (knee), 1; purulent pericarditis, 1; pericarditis, 2; endocarditis, 1; diarrhœa, 3; hiccough, 11; jaundice, 2; pharyngitis, 2; erysipelas, 1; old pleurisy, 1; typhoid condition, 3; old organic heart disease, 1.

Pulse, Temperature, and Respiration.—(a) Average, first day: Pulse, 116.22; temperature, 103.62°; respirations, 34.76.

(b) Average maximum: Pulse, 132.82; temperature, 104.64°; respiration, 46.87, as follows:

Pulse, 100 in 10 cases; temperature, 102°+ in 3 cases; respiration, 30 in 15 cases.

Pulse, 110 in 7 cases; temperature, 103°+ in 17 cases; respiration, 35 in 12 cases.

Pulse, 120 in 22 cases; temperature, 104°+ in 34 cases; respiration, 40 in 11 cases.

Pulse, 130 in 14 cases; temperature, 105°+ in 31 cases; respiration, 50 in 14 cases.

Pulse, 140 in 18 cases; temperature, 106°+ in 5 cases; respiration, 50 in 5 cases.

Pulse, 150 in 13 cases; temperature, 107°+ in 2 cases; respiration, 60 in 12 cases.

Pulse, 160 in 6 cases; temperature, ———; respiration, 65 in 4 cases.

Pulse, over 160 in 2 cases; temperature, ———, respiration, over 70 in 11 cases.

Duration of Illness.—One day, 3; thirty six hours, 2; two days, 1; three days, 4; four days, 7; five days, 9; six da s

19; seven days, 21; eight days, 4; nine days, 3; ten days, 3; eleven days, 1; thirteen days, 2; fifteen days, 2; sixteen days, 3; eighteen days, 2; nineteen days, 1; twenty days, 1; one month, 1; three and one-half months, 1.

Results.—Immediate: Recovery, 62; died, 31. Remote: Died, 3.

The following conclusions seemed to be established from the above:

First.—An unusually severe, general and fatal endemic of croupous pneumonia at this prison, coming on without apparent cause and ending, practically, abruptly.

Second.—That more than double the percentage of negroes was attacked when compared with the whites.

Third.—That it affected alike all ages, except between 20 and 30.

Fourth.—That it attacked the robust and strong the same as those in more or less bad physical condition.

Fifth.—That it affected those who worked outside the same as those who worked inside the mines.

Sixth.—That an unusually large number was suddenly and violently attacked.

Seventh.—The excessive area of pulmonary tissue involved.

Eighth.—The unusually high temperature for pulse and respiration.

Ninth.—The low mortality considering the extraordinary severity of the endemic and the character of the patients.

Remarks.—Why this endemic should have occurred is one of those mysteries that will remain unsolved. That it depends upon the pneumonia germ there is no doubt; in fact, its history is a clear and perfect demonstration of the existence of a specific and definite cause of this disease. To emphasize this fact, there was not another case of pneumonia in the whole community of several thousand people; nor was there a case at the shaft prison, one mile distant, where there are 500 convicts, under practically the same environment.

Prophylaxis.—To stop this terrible endemic was the all-

important problem. There was nothing to do in the way of improving the hygiene of the prison. No one could make any suggestions in that direction. It could not be attributed to the personal hygiene of the convicts for reasons given above. While there was no *apparent* cause for the development and growth of the pneumonia germ, yet the latter was getting in its deadly work effectually and rapidly. What could be done? Two plans were proposed: One to get away from the disease by moving out, and one to attempt a thorough disinfection of the prison and everything belonging to it. The first promised almost certain success, but was extremely difficult to execute; the latter promised little, but was easily executed. My judgment was to do the former; the State health officer suggested a trial of the latter, to which I assented, although without much faith in success.

The following method was adopted: The dormitories were cleared of rubbish, boxes, trunks, etc., and floors swept thoroughly. The mattresses and blankets were spread out on the floor. Then with a hand-pump a bichloride of mercury solution— $\frac{3}{4}$ iv to fifty gallons of water, or about $\frac{5}{8}$ j to the gallon—was thrown against the walls and ceiling (all wood) with considerable force, being particularly careful to strike the entire surface by taking a plank at a time. The solution fell upon the bunks, mattresses, blankets, etc., all being turned so as to thoroughly wet them. The amount of bichloride used in each wing was five pounds, dissolved in about twenty fifty gallon barrels of water. The surface covered—walls, floor, and ceiling—was 22,280 square feet.

The mattresses were not saturated through, but the ticking was wet. The mattresses and blankets were then put into a large wooden sterilizer, about eighteen at a time, and steamed with dry steam for three hours. When taken out, they were almost dry; then exposed on a scaffold to the sun for a few hours and put back on the bunks. The wing was not inhabited for two days and nights. On the third night the convicts were put back. In this way, the entire prison was disinfected on the following dates: One wing on the 14th, one on the 16th, and one on the 18th of May.

I now call especial attention to the following facts :

1st. From the 1st of April to the 14th of May, when the disinfection was begun, there had been 67 cases, 31 of them occurring during the last week preceding the disinfection, showing a rapid increase in the number of cases.

2d. That during the third week there were 13 cases, and finally only seven cases after the disinfection was completed.

3d. Therefore, the all-important fact that the endemic almost abruptly terminated after the disinfection.

Now, the question is, Was this last fact a coincidence or a sequence?

The argument in favor of the former is strong, according to my experience, the main point being that endemics of pneumonia usually start and stop without apparent cause. We have had several at both prisons at Pratt Mines, lasting from a few weeks to several months. But in none of these was the increase so rapid and the termination so abrupt. Usually there would be a few cases occurring at increasing periods, and of much less severity, until they were regarded as sporadic.

One case, however, of pneumonia after being exempt from the disease for some time, was almost always the precursor of a series of cases.

The argument in favor of the latter, in my opinion, is as follows:

1st. The disease was rapidly on the increase.

2d. There had been no modification of the type or severity of the disease.

3d. The almost abrupt termination of the endemic.

4th. There has not been a case at this prison since up to this date.

I am, therefore, of the opinion that the termination of this terrible endemic was attributable to the disinfection, the main features of which may be summarized thus:

1st. Removal of sash from the windows, thus allowing a free *current* of air to pass constantly through the interior. Removal of the convicts for two days and nights.

2d. The germicidal effect of the bichloride and the mechanical effect of the water in removing dust.

3d. The thorough steaming of the bedding.

The specific cause, then, was evolved at, and confined its action to this prison. Whatever the particular conditions that led to its development cannot be assigned to unsanitary conditions; but that these essential conditions did exist, and were confined to the prison building proper, I think is demonstrated. *The disease was strictly endemic.* The prison was visited by the State health officer, Dr. Jerome Cochrane; the physician of convicts resides near the prison and visits it daily; a number of physicians from Birmingham also visited the prison at my request—all of whom pronounced the sanitary condition of the prison to be good.

The disease had the appearance of breaking out spontaneously. With the endemic was an affection, commencing about the 1st of May, characterized by high fever, severe pain in head, limbs and back, and chilly sensations, lasting from three to six days; all ending in recovery, unless the one reported as dying from pneumonia, *without* pulmonary lesion, belonged to it. The sick list became considerably increased by the same affection in a milder form. Many of the cases of pneumonia had symptoms pointing to this affection—*e. g.*, pains in limbs, head, back, etc. (see symptoms).

What was this disease? In my official report I pronounced it "la grippe." To this opinion I still adhere. The State health officer and others, however, disagreed with me, and pronounced it as being "due to the same morbid influence as the pneumonia"; but they did not name the disease. As it occurred late in the endemic, and suddenly, I regard it as an independent disease—and, I think, la grippe.

In my opinion, this endemic, in view of the above facts, demonstrates that croupous pneumonia is a specific, constitutional disease, dependent upon a specific materies morbi, or pathogenic germ; that this germ may develop and become powerfully active under the most favorable sanitary conditions; finally, that it may be destroyed or rendered inactive

by thorough disinfection. Therefore, I believe that where pneumonia prevails in public institutions, asylums, penitentiaries, etc., or in the homes of families, that a thorough disinfection should be done.

Mortality.—A mere glance at the extent of local pulmonary inflammation, and at the average and detailed maximum pulse, temperature and respiration, at once proves this to have been an unusually severe, almost malignant, endemic. A little analysis will show this: Thus in 23 cases the entire lungs were involved, representing 115 single lobes; in the remaining 69 cases (17 double, 52 single), 116 lobes were involved; altogether 231 lobes, or an average of $2.51+$ lobes to each case. Leaving out the 23 cases in which the inflammation was universal, the average for the remaining 69 cases was $1.68+$ lobes to each case. Further, of the 69 cases, 23, or 33.33 per cent., an entire lung was involved; also, in 18 an upper lobe was involved. Of the 93 cases, 31, or exactly $33\frac{1}{3}$ per cent., died during the attack of the pneumonia. Three subsequently died—one $3\frac{1}{2}$ months after the pneumonia developed, from acute suppurative arthritis of hip-joint and phlebitis and thrombosis of femoral vein on same side, developed during convalescence; one on the 18th day after the pneumonia had cleared up, from acute suppurative arthritis of shoulder-joint and suppurative pericarditis, developed during the attack of the pneumonia; one from acute dilatation of the heart during convalescence, in a case of valvular disease with beginning dilatation at the time of the attack of pneumonia. Adding these three, there were 34 deaths, or 36.55 per cent., all told. In the following discussion these three are omitted.

In the 31 fatal cases the disease was located as follows:

Entire lung, 23; entire right and lower lobe of left, 1; lower lobe of right and upper lobe of left, 1; entire left and lower lobe of right, 1; entire right, 3; entire left, 1; no pulmonary inflammation, 1. It will be observed that only 4 were single and each involved an entire lung.

The average maximum pulse, temperature and respiration

was: Pulse, 145.09; temperature, 105.06; respiration, 60.48.

The day of death was as follows:

1st, 3; 1½ days, 2; 2d, 1; 3d, 2; 4th, 4; 5th, 3; 6th, 5; 7th, 7; 8th, 1; 9th, 2; 16th, 1.

Post-mortem examination was made in all these cases. In some there had been a simultaneous invasion of the entire lungs; in others, a successive invasion; while in others all stages of the disease were found.

Treatment.—Under this head I will briefly discuss three questions only—stimulants, antipyretics, and special. In eight no stimulants were used. In the remaining 85 whiskey was used in all; strychnine in 41; digitalis in 15; strophanthus, in 24; carb. ammon. in six; nitro-glycerine in one. Two or more of these were sometime used in the same case.

Whiskey was given in the majority of cases from the beginning, being increased as indicated. Strychnine was given at the beginning of the endemic only in the cases of extreme heart failure or later in the disease as an adjunct to the whiskey. Later in the endemic it was given as a matter of routine from the first day in doses of one-fiftieth grain every three hours, increased if pulse showed much weakness to the one twenty-fifth grain. In all cases it was given hypodermically. Tincture stophanthus was given only in the cases of extreme heart failure in two to four-drop doses hypodermically. The effect in these cases was often remarkable. As soon as the pulse improved it was discontinued. Digitalis and carb. ammon. were given at first, but abandoned as useless. I repeat now what I said in paper before this Association two years ago, that carb. ammon. is absolutely useless in this disease, both as a stimulant and as a preventive of heart-clot.

Antipyretics.—Baths: Both lungs, 6; double, 3; right, 2; left, 0; single, 11. Total, 22.

Baths, quinine, etc.: Both lungs, 3; double, 4; right, 3; left, 0; single, 5. Total, 15.

Quinine: Both lungs, 5; double, 2; right, 1; left, 0; single, 1. Total, 9.

Quinine and phenacetine: Both lungs, 2; double, 3; right, 2; left, 1; single, 6. Total, 14.

Quinine and antifebrin: Both lungs, 5; double, 2; right, 2; left, 0; single, 9. Total, 18.

Phenacetine: Both lungs, 0; double, 0; right, 1; left, 0; single, 0. Total, 1.

Antifebrine: Both lungs, 0; double, 1; right, 0; left, 0; single, 0. Total, 1.

No Antipyretic: Both lungs, 2; double, 1; right, 1; left, 1; single, 6. Total, 11.

No antipyretic: No pulmonary inflammation, 1. Total, 1.

Average Maximum Pulse, Temperature, and Respiration.—

Baths: Pulse, 138.87; temperature, 105.18°; respiration, 47.72.

Quinine: Pulse, 146.63; temperature, 104.80°; respiration, 59.44.

Quinine and phenacetine: Pulse, 130.71; temperature, 104.80°; respiration, 50.

Quinine and antifebrine: Pulse, 127.50; temperature, 104.06°; respiration, 42.77.

Baths, quinine, etc.: Pulse, 139.23; temperature, 105.38°; respiration, 54.61.

Mortality: Location and Extent of Inflammation.—Baths, 6: entire lungs.

Quinine, 5; entire lungs.

Quinine and phenacetine, 6: lungs, 3; right lung, 2; left lung, 1.

Quinine and antifebrine, 5: entire lungs, 5.

Phenacetine, 1; right lung.

Antifebrine, 1: right lung; lower lobe of left.

Baths, quinine, etc., 4: entire lungs, 2; right lung, 1; entire left lung, 2; right, 1.

No antipyretic, 3; entire lung, 2; no inflammation, 1.

It appears that antipyretics were used in eighty of the ninety-two cases. Of these, twenty-eight died. In twenty-one of the deaths the entire lungs were involved, and as all such cases invariably die, regardless of any or all treatment, they are worthless in comparing the effects of different methods and agents of antipyretic treatment.

Deducting these twenty-one cases, in which the inflammation was involved, from the eighty cases in which antipyretics were used, we have fifty-nine cases, as follows:

Baths: 16 cases and no deaths.

Quinine: 4 cases and no deaths.

Quinine and phenacetine: 12 cases and 3 deaths, or 25 per cent.

Quinine and antifebrine: 13 cases and no deaths.

Phenacetine: 1 case and one death, or 100 per cent.

Antifebrine: 1 case and 1 death, or 100 per cent.

Baths, quinine, etc.: 12 cases and 2 deaths, or 16.66 per cent.

Total, 59 cases and 7 deaths, or 11.86 per cent.

Dividing these cases into two classes—one in which baths were used alone or as the main antipyretic measure, and one in which quinine, phenacetine, and antifebrine were used separately or conjointly—we have:

Baths: 28 cases and 2 deaths, or 7.14+.

Quinine, etc.; 31 cases and 5 deaths, or 16.12+.

It thus appears that the mortality in the bath cases was 1 to 2.25+ of the other antipyretics. This is certainly a remarkable difference. What is the explanation? In answering this question two things must be taken into consideration—the extent of the pulmonary inflammation and the type of the disease, as shown by pulse, temperature, and respiration.

By reference to the above table we find the following:

Baths, quinine, etc.: Double, 7; entire lung, 5; single, 16.

Other antipyretics: Double, 8; entire lung, 6; single, 17.

From these facts we learn that there was practically very little difference in the average extent of pulmonary inflammation. Therefore, the explanation is not due to difference in severity of the inflammation.

By examining the above table we learn something of the severity of the disease as shown by comparison of the average pulse, temperature, and respiration.

Baths, quinine, etc.....	P., 139.06; T., 105.28; R., 51.16+
Other antipyretics.....	P., 134.95; T., 104.57; R., 50.73+
Difference.....	4.11 .71 .43

It appears from these facts that the type of the disease was severer in the bath cases.

The conclusion, therefore, that baths constitute the safest

and most reliable method of reducing temperature, necessarily follows if these statistics prove anything.

To enter into any discussion as to the probable explanation of this would be out of place in this paper; but in the following remarks on "Special Treatment" I will have something to say in reference to the bath treatment, as it was the antipyretic method adopted in the treatment of most of the cases coming under this head:

Special Treatment.—Under this heading might be discussed measures adopted to meet special indications—vomiting, constipation, diarrhœa, pain, sleeplessness, delirium, cough, etc., etc.; but these I will omit, as I have nothing new to offer. I will confine my remarks, therefore, to one feature of the special treatment, to-wit: *Hypodermoclysis*, or the subcutaneous injection of a saline solution—chloride of sodium 5j to the pint of water. So far as I know this is absolutely new in the treatment of this disease.

During the last ten years I have observed several hundred cases of croupous pneumonia, two facts being especially impressed on my mind, namely:

1st. The prostration and marked debility that always attend the onset of the disease, in many cases amounting to a veritable shock, and for the relief of which the methods of treatment ordinarily used frequently failed—the depression continuing throughout the disease.

2d. In the fatal cases the almost universal presence of large antemortem heart-clots.

It has often occurred to me that if a thorough reaction from this great prostration or shock could be established and heart-clots prevented, that many cases would recover that otherwise died. To this end I have adopted the measures usually advised in the text-books, some special measures brought out in the discussions of this disease in medical societies and journals, with good results, in many cases, so far as the prostration is concerned, but with entirely negative results in preventing the heart-clots. In studying this disease two facts—one clinical and the other pathological—were impressed upon my mind: 1st. The prostration

in this disease greatly resembled surgical shock. 2d. The chlorides are always diminished in the urine, as the disease advances, usually in proportion to the extent of pulmonary inflammation, reappearing in correspondingly increasing quantities during resolution. It occurred to me, therefore, that if this prostration were treated after the manner of treating shock, and that if the blood were supplied with additional chlorides, the heart clots might be prevented. Both of these indications seemed to be met by the introduction into the blood of a warm saline solution. I, therefore, determined to inject into the veins or arteries—after the manner of treating surgical shock or hæmorrhage—a warm, aseptic salt solution of the strength given above. At the suggestion of Dr. Jerome Cochrane, State Health Officer, I adopted hypodermoclysis as the method, using a fountain syringe and a medium-size aspirator needle as the instruments and the subcutaneous tissue of the abdomen as the site for the injection.

On the following page is a table of the cases thus treated, giving location and extent of pulmonary inflammation, complications, maximum pulse, temperature and respiration, antipyretics used, number and days of the hypodermoclyses and result.

Of the sixteen cases, five or 31.25 per cent. died—a little less than the percentage of the mortality of all the cases. In all of the fatal cases the pulmonary inflammation was universal; therefore, necessarily fatal. Of the remaining eleven it will be noticed that pulmonary inflammation involved 1.72 lobes to each case, which is slightly greater than the general average, leaving out the cases in which the inflammation was universal, as noted above. The conclusion, therefore, that these cases were severer, so far as the area of inflammation was concerned, is correct. It will be noticed, also, that the average maximum pulse, temperature, and respiration is *less* in these cases, when compared with the average of the bath cases, as noted above. Baths constituted the antipyretic measure in thirteen of the cases. It

TABLE OF TOTAL NUMBER (16) OF CASES TREATED BY HYPODERMOCLYSIS.

No	SITE OF INFLAMMATION.	COMPLICATIONS.	P.	T.	R.	ANTI-PYRETIC	No. OF INJECTIONS	DAY OF DISEASE.	RESULTS.
1	Entire left and upper lobe of right.....	.....	156	105½	48	Bath and quinine.	2	2 and 4	Recov'y
2	Entire left and lower lobe of right.....	Hiccough.....	146	106½	60	Bath.....	1	8th	Recov'y
3	Entire right.....	Typhoid conditions.....	134	104	50	Bath.....	2	4 and 6	Recov'y
4	Lower lobes, both lungs.....	.....	120	104½	28	Bath.....	2	2 and 5	Recov'y
5	Entire lungs.....	.....	150	104	64	None.....	2	2nd	Died
6	Upper lobe of right lung... {	Abscess in abdominal wall.....	120	105½	40	Bath.....	3	3-4-5	Recov'y
7	Entire right lung.....	.....	120	105½	30	Bath.....	1	3	Recov'y
8	Lower lobe of right lung.....	.....	108	103½	30	None.....	1	3	Recov'y
9	Entire lungs..... {	Jaundice, arthritic knee.....	134	105½	62	Quinine and antifebrine.	2	4 and 6	Died
10	Upper lobe, right lung..... {	Purulent pericarditis, arthritis shoulder joint.....	144	104	54	Bath.....	1	3	Recov.*
11	Entire lungs.....	.....	148	105½	56	Bath.....	4	3-4-5 6	Died
12	Entire lungs.....	Hiccough.....	132	105	60	Bath.....	2	3-4	Died
13	Lower lobe, right lung.....	Phlegmon in neck.....	108	104½	30	Bath.....	1	1	Recov'y
14	Entire lungs.....	.....	144	104½	56	Bath.....	2	1 and 2	Died
15	Lower lobe, right lung.....	.....	116	105½	36	Bath.....	1	1	Recov'y
16	Entire right lung..... {	.....	132	103½	48 {	Bath and quinine. }	1	2	Recov'y

* Subsequently died.

appears to me, therefore, that the favorable statistics of the bath treatment may be partly due to the hypodermoclysis. As a matter of fact, the pulse, temperature, and respiration were improved by the injections, particularly the pulse. In this connection I call attention to case No. 2 in the table. It will be observed that this case was desperate—fast, irregular, and intermittent pulse; excessively high temperature and fast respiration; one entire lung and lower lobe of the other involved. At the time of the hypodermoclysis he was almost pulseless; was semi-conscious; involuntary fæcal discharges. He was given one pint in the subcutaneous tissue of the abdomen, and he soon after revived and made a good recovery.

Its effects in preventing cardiac thrombosis.—In this particular the treatment by hypodermoclysis, in my judgment, demonstrated its comparative efficiency.

I now call your attention to these cardiac clots. These large clots were taken from the cases that did not have the hypodermoclysis. I call your especial attention to them. You will observe, in the first place, their enormous size; secondly, their hardness and toughness; thirdly, that they are almost white; fourthly, that they are an almost exact cast of the cavities of the heart; fifthly, you will also observe that, in some of them, they are continuous from the auricle to the ventricle, thence to the pulmonary artery and to its bifurcation or to the aorta and up its ascending portion to the arteria innominata; you will also observe the shape of the auricular appendix, the narrowing at the auriculo-ventricular and pulmonary and aortic openings. By examining these constrictures—particularly the pulmonic and aortic—you will observe the shape of the valves apparently cut into the clot; at the pulmonic and aortic openings you will especially notice three little barbs as if cut away from the main clot, corresponding in shape to the sinuses of valvular. These clots, of course, are somewhat hardened by the alcohol, but they have not changed their shape or color, unless, indeed, they are a little darker. The clots were in

timately adherent—not by organization, but by agglutination to the columnæ carneæ, chordæ tendineæ and musculi pectinati. I have seen the weight of the heart sustained by them. After examining these clots I think that you will conclude with me that they are, beyond the shadow of a doubt, ante-mortem in their formation, probably for several days or hours before death; and that, once found, they will invariably and inevitably result in death, regardless of the course of the pneumonia.

In contrast with these clots, please notice those clots found in the hearts of fatal hypodermoclysis cases. All of the clots in these last cases do not equal one of the others. In fact, with two exceptions, you will notice these clots are insignificant. I call your particular attention to this specimen. It was taken from the heart of Case No. 11. This was a case in which there was a successive invasion of the lobes until all of the lungs were involved. He had four injections—one each on the third, fourth, fifth, and sixth day. It was the only fatal case in which the treatment was thoroughly tried. You will observe that this entire clot could be covered by a twenty-five cent piece. It was found loosely attached to the chordæ tendineæ of the right ventricle. There was no post-mortem clot in the heart or veins; the blood was fluid and escaped from the vessels as in the living subject. In fact, it was so life-like as to be really alarming, notwithstanding rigor mortis.

From the remarkable contrast in these clots, taken separately and collectively, I think I have demonstrated the fact that by the introduction into the blood of this saline solution, systematically and regularly, at least once a day, cardiac thrombosis may be prevented, or at least mitigated, a result, according to my experience, that has never been achieved before.

An examination of the urine after each injection showed the presence of chlorides in an increased quantity.

The relation of cardiac thrombosis to the prognosis of croupous pneumonia, I am aware, is a mooted question—

most authorities believing that they are either post mortem or are incident to other conditions immediately preceding death. That such is the fact in many cases, I have no doubt; but that they often form and become the immediate cause of death in otherwise favorable cases, to my mind, the clots I have shown you are a complete and perfect demonstration. Therefore, to prevent their formation is of vital importance. No treatment up to date has succeeded in my hands entirely, but the hypodermoclysis so nearly succeeds, as shown by these small and insignificant clots, that it merits further trial and investigation.

In my judgment, the injections should be given daily, in from four to twelve ounce quantities, the presence of chlorides in the urine and the condition of the pulse being the guide for the amount and time between the injections. If the pulse is good, and there is an abundance of the chlorides in the urine, the injections may be omitted until there is an unfavorable change in these particulars.

The little operation is harmless if thoroughly aseptic. The salt solution should be boiled; the abdomen or other part selected made aseptic; the needle and syringe should also be aseptic. The only bad results in the twenty-eight injections was a phlegmonous abscess on both sides of the abdominal wall in one case, caused by a septic solution, the water not having been boiled. The patient recovered (Case No. 6). In one other there was a structural abscess, but it did not form. More or less soreness will follow.

The case alluded to in several places in this paper, in which there was no pulmonary inflammation, calls for special notice. The following is a brief synopsis of the case:

Mit. H.—Committed to the penitentiary February, 1892; negro; trammer in mines; third class: admitted May 13th; attack sudden and violent; bowels open; pulse fair; great prostration; P. 100; T. $103\frac{2}{3}$; R. 28; complained of sore throat; physical signs, negative; maximum, P. 116; T. 105; R. 28; died in thirty-eight hours. Post mortem: A few isolated patches of congestion in both lungs; heart in

diastole; all the cavities filled with clots, continuous through each auriculo-ventricular opening, sending branches or continuations within the pulmonary artery and aorta. I show you this clot; you observe its large size; you will notice that it is not quite so firm as the others; that its color is a dark red. There can be no question but that it formed before death, and that it was the immediate cause of death, killing the patient before the local inflammation had time to develop. This death was not due to the overwhelming influence of the poison on the nervous system, as shown by the pulse; neither to the inflammation, as it had not developed. Notice the respiration. The State Health Officer was present at this autopsy, and gave it as his opinion that the case was one of pneumonia, or, at least, due to the "same morbid influence as the other cases." In my own mind, I am not satisfied as to the primary cause of death; but that the heart clot was the immediate I have no doubt.

In concluding this paper, I will briefly give you my views on croupous pneumonia:

1st. It is a constitutional disease, with a local anatomical sign, consisting of an inflammation of the pulmonary parenchyma, and caused by its own specific *materies morbi* or germ, probably that of Fränkel or Friedlander.

2d. That the special circumstances under which this germ is evolved and operates are unknown, as we have it under diametrically opposite conditions, both good and bad.

3d. That the disease, as a rule, prevails endemically, rarely epidemically, and still more rarely sporadically.

4th. That these endemics differ in type and in extent of pulmonary inflammation, and, consequently, in mortality.

5th. That the disease is severer in public institutions, especially prisons.

6th. That the negro is especially predisposed to the disease, has less capacity to resist it, and, consequently, a larger mortality.

7th. That coal-miners, especially negroes, while not predisposed to the disease, are favorable subjects for extensive pulmonary inflammation, and have less capacity to resist the disease, owing to the more or less anthracosis of the pulmonary tissue.

8th. That the mortality is mainly determined by the type of the disease; first, in the primary effect of the germ upon the nervous system; and secondly, the extent of pulmonary inflammation and in the rapidity of its invasion and development.

9th. That the mild, uncomplicated cases, with a fairly good pulse and moderate temperature, and with only one lobe, especially a lower lobe, involved, intrinsically tend to recovery; and that the severe cases, complicated or not, with fast and weak pulse, fast or labored respiration, regardless of temperature and attended by great prostration, intrinsically tend towards death, and without judicious treatment will die, regardless of the extent of pulmonary inflammation; and that in the cases in which the pneumonia is double, particularly if the double invasion is simultaneous, their tending is to a fatal issue; and finally, that in the cases in which the inflammation is universal by a simultaneous or rapidly successive invasion of the entire lung structure, death is the inevitable rapid result. Therefore, in comparing statistics, all these things should be taken into account: otherwise they are worthless. Hence the wide divergence in the statistics and difference in treatment of various observers.

10th. That the immediate cause of death in many cases is ante-mortem heart clots.

11th. That the main features of treatment are: (a) to combat the shock of the germ invasion, best done by opium, stimulants, and, in my opinion, hypodermoclysis; (b) to stimulate freely, the best stimulant, as a matter of routine, being whiskey and strychnine, supplemented in extreme cases by tincture *strophanthus*; (c) to control temperature, the best method being the bath; (d) to prevent, if possible, heart clots, hypodermoclysis, in my opinion, being the most reliable; (e) to meet indications as they arise.

ART. IV.—The Law of Virginia as to the Right of Physicians to Recover their Fees by Suit.

By SAMUEL D. DAVIES, of Richmond, Va.,

LATE PROFESSOR OF LAW IN RICHMOND COLLEGE, ETC.

It is a curious fact that under the law of Virginia physicians have no express authority to demand their fees by legal proceedings, except in the special case provided for by section 2660 of the Code, which applies to services rendered during the last illness of a deceased person, and even that provision might be construed to mean such claims only as are based upon actual agreement with the patient. Remedial legislation on this subject would seem to be proper, if not necessary, from the fact that at common law a physician was forbidden, or at least disabled, to sue for his fees in the absence of a contract for remuneration, and so far as our statutes go, the general common law disability continues to the present moment. For it is a familiar principle that where the common law has established a rule in relation to any matter, that rule prevails until it has been changed by statute; and section 2 of the Code provides in terms that the common law (with certain qualifications not pertinent to the present enquiry) "shall continue in full force and be the rule of decision, except in those respects wherein it is, or shall be, altered by the General Assembly."

It is true that common usage in this age and country, the universal understanding both of patients and physicians, that medical services constitute the basis of a legal claim to compensation, would probably determine this question in favor of the practitioner, as upon an implied contract; but the right, such as it is, depends at last upon the effect of usage, and lacks the security of legal recognition and protection. Besides, at common law there can be no *implied* contract on the part of the patient to pay, because the legal presumption is that the physician renders his services *in expectation of a gratuity, only*.*

* The common law has been so changed with us, in favor of attorneys, as to enable them to recover on an implied, as well as on an express, contract for compensation.

Let us see, then, 1st, What is the common law on this subject; 2d, How far it has been changed by statute in England, and 3d, How far in Virginia.

1st. The common law doctrine is thus summed up by Mr. Broom: "A physician, although he may have acted at the request of the patient, will not at common law, *without proof of an actual contract*, be entitled to sue him for services professionally rendered, the presumption being here against the existence of a contract for remuneration." Com. on C. L. 326.

The common law on this subject was authoritatively declared for the first time in 1791 in the case of *Chorley, M. D. vs. Balcot, Ex'r*, 4 T. R. 317. There the plaintiff, a physician living at Doncaster, brought an action for his fees for attending a considerable time on the defendant's testator, who lived at some little distance from the town; and the evidence was that at Doncaster and its neighborhood there was no certain rule about fees, but the general practice was for a physician to receive two guineas a week for his attendance. The plaintiff obtained a verdict, and on the defendant's motion to set it aside it was argued for the plaintiff that while such a claim had several times been adjudged adversely to the claimant at *nisi prius*, yet the question had never been solemnly decided; nor was there any authority in the books for putting the claim of physicians' fees upon the same footing as those of a barrister. In the case of barristers, it might originally have been proper that no temptation should be held out to countenance injustice; but in the case of physicians, it would be equally impolitic that those who are frequently put to expense in attending patients at a distance, and who are liable to make reparation to those who may suffer by their want of skill, should not be certain of a just and honorable reward. But, in spite of this reasoning, Lord Kenyon set aside the verdict upon the ground that "physicians' fees are honorary, and not demandable of right."

Many decisions followed to the same effect, but only one

of them will be mentioned. A physician in Virginia usually feels no uneasiness about making his fee if he renders professional services to A. at the request of B., provided B. is solvent. But this cheerful view is altogether mistaken from a common law standpoint, as appears from the case of *Veitch vs. Russell*, 3 Q. B. 928 (43 E. C. L. R.) decided in 1842. In that case, a lady of moderate fortune requested the plaintiff, a physician, to attend her brother, who was ill and in indigent circumstances. After the plaintiff had so attended for some time, the lady wrote him: "As your account against me for attendance on my brother must be formidable, you will oblige me by letting me have it. * My wish is to present you with such a sum as you would call on me to pay you. * I do not know what you would deem, under the circumstances, a suitable acknowledgment. * I hope you will at once tell me what sum will be agreeable to you to accept from me." The plaintiff named £150, which the defendant said was more than she had expected or could afford to pay; and, after some other communications, she wrote: "Let me know the name of your bankers, that I may pay £70 to your account, and liquidate my debt to you up to the present time. You will further oblige me by letting me know on what terms you will continue your visits."

The physician brought his action for the larger sum, and the judge left it to the jury to say whether there had been a contract between the plaintiff and defendant for payment of fees. The jury thought not, and found a verdict for the defendant, which Wightman, J. refused to set aside. "It was conceded at the trial," he said, "that the plaintiff, according to *Chorley vs. Balcot*, could not set up a legal title, but it was said that a special contract might be inferred from the evidence; and the question was whether anything appeared beyond the mere circumstance of the plaintiff having attended, at the defendant's request, from which the jury could infer a contract. The physician, in every case, attends on request; that fact alone is not sufficient for the inference. The case went to the jury without any undue

pressure against the interests of the plaintiff, and they thought there was not sufficient evidence of a contract or understanding, and that the parties had dealt on the ordinary terms, and that the defendant meant to offer the plaintiff a gratuity if he would accept it."

Such was the common law of England, and so it remained until 1858, when it was changed by statute. Why is it not the common law of Virginia at the present day, in the absence of a corresponding statute? If a remedial act of the Legislature was necessary in England, why not here?

2d. The statute 21 and 22 Vict., known as the "Medical Act," completely reversed the former law in England, and thus, by express enactment, physicians acquired the right to sue for their fees, as was determined in *Gibbon vs. Budd*, 2 H. & C. 92, decided in 1863.

This effect of the act was strongly contested by the defendant's counsel in that case, and several of the judges delivered separate opinions upon the construction of section 31. That section declared that every person registered thereunder should be entitled to practice medicine or surgery, or both; "and to demand and recover, in any court of law, with full costs of suit, reasonable charges for professional aid, advice, and visits, and the costs of any medicines or other medical or surgical appliances rendered or supplied by him to his patients: Provided," etc.*

The action was brought by the plaintiff, a member of the Royal College of Physicians duly registered under the act, against the executor of Henry Budd, to recover twenty guineas for twenty professional visits alleged to have been made to the deceased in 1861; and, among other things, it was contended by the defendant, as matter of law, that even if the jury should be satisfied that the alleged visits had been paid as ordinary professional visits, inasmuch as there was no evidence of an express contract, the action was not maintainable.

But Baron Pollock said: "The object of the section is to

*The main contention was about the construction of the *proviso*.

set at rest all doubt as to the right of a physician to recover his fees, but to enable the Fellows of the College, if they desire that the dignity of their body should be preserved by practising for an honorarium, to effect that by a by-law."

Baron Bramwell said: "The question of law which we have now to determine is, whether a physician (attending on the ordinary terms) has, under such circumstances, a mere right to an honorarium, or, by operation of the Medical Act, a right to recover his fees which he can enforce in a court of law. In the case of *Veitch vs. Russell*, Lord Denman has clearly stated what the legal position of a physician was in relation to his fees before this act passed. It was competent for the physician to stipulate that if he attended the patient it must be upon terms that the patient undertook to pay his fees as matter of contract. But if he did not do so, the presumption was that the physician attended in the expectation of an honorarium, and so far gratuitously that he had no legal right to enforce payment."

The Medical Act had changed all that, and meant "that the former presumption as to the relation between physician and patient should cease, and that a physician when registered should be, as to remuneration for his services, in the same situation as any other person."

3d. I have been unable to find that any State in the Union has adopted the policy of the English act in changing the common law and expressly conferring upon physicians the right to sue for their fees. In some States the right is indirectly granted by prohibiting any but graduated practitioners to recover their fees by action at law.

The present Virginia statute (section 1750 of the Code)* provides that "no person shall practice as a physician or surgeon *for compensation*" without having first obtained and recorded a certificate from the Board of Medical Examiners. But whether the compensation is to be gratuitous as at common law or recoverable by suit, as under the English act, is undetermined. It would seem, however, that the

*Amended in Acts 1891-2, page 255.

common law would be the "rule of decision" here, and that the right to sue is not conferred—certainly not expressly, nor by necessary implication.

It will not be uninteresting to take a short review of the early legislation of Virginia in respect to physicians and surgeons—I might have said in disrespect to them, for the preambles to the several acts are as little complimentary to that honorable profession as they are to the lawyers during the same period.

The first act of which we have any information was adopted in 1630. After reciting that "in consequence of the immoderate and excessive rates and prices exacted by practitioners in physic and chyrurgery, the hearts of divers masters were hardened rather to suffer their servants to perish for want of fitt meanes and applications, than by seeking reliefe, to fall into the hands of griping and avaricious men," it was enacted that in case any person "should conceive the account of the phisitian or chirurgeon to be unreasonable either for his paines or for his druggs or medicines," the offending practitioner should be arrested and required to make oath to the value and quantity of his drugs, and the court thereupon was to allow him such compensation as it might think fit.—1 Hen. St., 316.

In 1660 an act was passed allowing physicians and surgeons to recover their accounts "for meanes administered and paines taken in the fitt of sickness whereof the patient dyes, and when the patient recovers, six months after such recovery, and noe longer."—2 Hen. St. 26 (109–110.) This was a special favor to the doctor, for at that time the general law prohibited any recovery against the estate of a decedent.

An act of 1692 repealed the act authorizing physicians and surgeons to be arrested, and empowered the court to allow them "for their care, visits, and attendance a recompence suitable to their deserts."

Still no authority is given a physician to enforce his claim for medical services by a formal suit against the patient.

The amount of his recovery and the chance of recovering anything at all, depended entirely on the discretion (which might mean the caprice or prejudice) of the court, without the aid of a jury.

But, in 1736, an important act was passed, and, for the first time, it is intimated that physicians had a right to sue for their fees. Whether the language of the second section should be construed as confirming a right already claimed, or as conferring a new one, would be a doubtful question, but for the fact that, whatever the practice might have been, there was no prior statute giving the right to sue, and it may be presumed that the practice accorded with the law.

Here are two sections of the act:

"I. Whereas the practice of phisic in this colony is most commonly taken up and followed by surgeons, apothecaries, or such as have only served apprenticeships to those trades, who often prove very unskilful in the art of a phisician; and yet do demand excessive fees and exact unreasonable prices for the medicines which they administer, and do too often, for the sake of making up long and expensive bills, load their patients with greater quantities thereof than are necessary or useful, concealing all their compositions, as well to prevent the discovery of their practice as of the true value of what they administer, which is become a grievance dangerous and intolerable, as well to the poorer sort of people, as others, and doth require the most effectual remedy that the nature of the thing will admit:

"II. Be it therefore enacted by &c that from and after the passing of this act, no practicer in phisic, in any action or suit whatsoever, hereafter to be commenced in any court of record in this colony, shall recover for visiting any sick person more than the rates hereafter mentioned: that is to say:

	£.	s.	d.
For every visit and prescription in town or within five miles.....	0	5	0
For every mile above five and under ten.....	0	1	0
For a visit of ten miles.....	0	10	0
And for every mile above ten.....	0	0	6
With an allowance for all ferriages in their journeys.			
For a simple fracture and the cure thereof...	2	0	0
For a compound fracture and the cure thereof..	4	0	0."

But practitioners who had "studied phisic in any university and taken any degree therein" had a somewhat more liberal allowance for the same services. It was further provided that the act should continue in force for two years from its passage, and thence to the end of the next session of Assembly.—4 Hen. St., 509.

This act effected for physicians and surgeons in Virginia what it required an experience of one hundred and twenty-two years more to accomplish for the same profession in England. The common law disability was removed and a new relation established between physician and patient. But, strange to say, that act, limited as it was to two years and a little longer, dropped out of the statute-book and has never appeared there since. We look in vain for anything similar to it* in any of the Revisals, including that of 1887.

Consequently the common law, though suspended for a time, resumed its force upon the expiration of the act of 1736, and now prevails in all its vigor, unless, by common consent, the obligation to enforce it shall be deemed no longer binding.

*Of course, I do not mean to intimate that the same schedule of charges should be continued, or that any such schedule should be a matter of legislative regulation, but the right to sue for the value of his professional services should be as free to the physician as to any other person whose skill and labor are employed by request.

ART. V.—**Forensic Medicine.***

By C. G. COMEGYS, M. D., of Cincinnati, Ohio.

Forensic medicine and medical jurisprudence are synonymous terms. We employ them in the consideration of that branch of medicine that relates to its practical application in legal inquiries.

Eighteen years ago, in an address before the Alumni Association of the University of Pennsylvania, I proposed the recognition of a new specialty, namely: Forensic medicine, or the practice of law by physicians in all cases concerning internal and external diseases—toxicology, therapeutics, obstetrics, and especially in psychiatry or diseases of the mind; and I assumed that if such a specialty were thoroughly cultivated, it would greatly advance our influence and usefulness amongst the people. I had been led to this belief by a somewhat extensive experience as an expert in cases at the Bar involving, particularly, mental competency in the disposition of property by will—the ability to make valid contracts and responsibility in a variety of criminal actions. In this way I came to know that there are but few lawyers who are sufficiently informed in medical science to conduct, in the interests of truth and justice, many of the most important cases in medical trials. I do not say this disparagingly of their noble profession, but because they are usually unable, as mere lawyers, to reach that high discrimination involved in the terms of such investigations, without a very wide and exact study in the chemical, physical, and biological sciences that constitute the medical organism. Every physician, at such times, has observed the embarrassment of lawyers in trying medical cases; they propose a plenty of questions, but from their lack of medical experience, they cannot thoroughly appreciate the answers of a witness; and often, when endeavoring, as they say, to give the court and jury clearer views of the question, they con-

*Read before Mississippi Valley Medical Association, session in Indianapolis, October 4, 1898.

fuse the whole investigation. This disagreeable state of affairs is usually brought about by a lawyer who has crammed himself by a superficial study of medical works for the occasion.

On account of the confusion thus produced in the trial of cases, the medical profession is continually abused by a class of incompetent lawyers who lose their client's case and then endeavor to exculpate themselves by denouncing the opinions of medical experts.

One of these self-conceited and ignorant lawyers, who has thus been defeated by an intelligent expert brought into court by his opponent, pours out the grief and shame of his defeat in the following strain of malversation in the *Columbia Law Times* :*

"Of all the cant in this canting world, medical cant is the most pernicious. Of all species of evidence offered in a court of justice, none—not even the testimony of the accused, when a witness on his own behalf—is more freighted with suspicion than is the evidence of the medical expert. They come with such a bias on their minds to support the cause in which they are embarked, that hardly any weight should be given to their evidence. The medical expert, in times gone by, was a formidable ally of justice; but the corruptions of the world have demoralized him. These doctors are of the earth, earthy, and their virtue, if not an unknown quantity, is flagrantly insufficient in quality. The medical profession is guilty of a vast amount of very gaudy and unembarrassed lying; the average doctor is possessed of such an exalted opinion of his own accomplishments and such a corresponding contempt for antagonistic views, as seriously to cripple his judgment. He serenely mounts the stand with withering and chilling hauteur, composure, and touch-me-not-ed-ness that belongs only to the elect."

He sustains himself in these views by quoting the opinions of certain judges who are supposed to live in that condition of judicial calm which makes their judgments infallible, until they are set aside by their brothers of higher courts!

*Quoted from an admirable paper by Dr. Clark Gapen, read before the Section of Neurology and Medical Jurisprudence during the meeting of the American Medical Association in Milwaukee, Wis., June, 1893.

I can see no other way of escape from these indignities thus cast upon our profession than for a certain number of well-educated and well-trained physicians to enter upon the study of law and qualify themselves as attorneys and counsellors in forensic medicine. The field is very wide, and will command for its successful practice the highest culture of the intellect.

Such capacity cannot be quickly attained; assiduity and patience, under the guidance of a lofty purpose to prove that this apparent divergence from the old beaten track of medical practice is a just and indispensable function of medical usefulness. It is very apparent, at this time, that an unusual spirit of progress is animating the medical world. The great acquisitions of ability to discover the origin of diseases, and their prevention and treatment, has been so successfully displayed in the past twenty years that we now assert that if we could secure the full operation of hygienic laws we would be able to extinguish the whole breed of toxic germs that have made and continue to make such havoc amongst peoples. It is because of these new impulses of the medical consciousness that the important movement has been so successfully inaugurated in order to secure a Department of Public Health at the seat of government at Washington, in charge of a Secretary who shall occupy a seat in the Cabinet of the President, on a parity with his other Counsellors of State. Such an official would represent the medical consciousness of the nation, and be able to develop all those procedures for the happiness of society that relate to demography and hygiene.

In regard to this new specialty, I feel confident that it is as legitimate as the prosecution of others which are now so generally recognized, and which have accomplished so much to enlarge, illuminate, and successfully treat the appalling pathological states of the great organs of the body. It is a proposition for a wider culture and range of action in the State to aggrandize our influence and power; not to arouse any baleful ambition, but for the advancement of social existence.

The legal profession has been, since the overthrow of aristocratic government, the ruling class in society. We do not envy their self-assumed and lofty claims; we are actuated by neither jealousy nor rivalry; but we claim that we possess faculties for usefulness in the State that cannot, in the evolution of humanity, be dispensed with; for neither political economy nor jurisprudence can reach their full and beneficial expression without contributions from medical science. The efforts of all organizations for the betterment of barbarous and semi-civilized races are shown to be impossible unless sustained by the medical profession; and by limiting or restraining its humane offices in any lands will hamper and diminish the permanency of sound morals and the reverence and veneration of Almighty God amongst the people.

I believe that the highest order of juris-consults will welcome well-trained medical men to assist in the lofty work of establishing justice in the world.

ART. VI.—The Human Brain—An Appeal to the General Practitioner to Give it More Study.*

By J. HARRISON HODGES, M. D., of Gainesville, Fla.

* Read before the Florida Medical Association, Session 1893.

I wish briefly to call attention to some poorly expressed thoughts on the study of the human brain and its diseases and injuries, hoping thus to appeal to you to give this department of our science that attention which, from its importance, it has a right to demand.

Brain surgery and diseases of the brain are receiving the careful consideration of medical bodies over the entire world. A great deal which was unknown and unknowable, with their crude methods of research, to the older investigators, has been accurately determined in recent years; but, unfortunately, science has not yet completely mastered this monarch of organisms, the human brain. There still remains

much to be known, and ample room for investigators and students of science.

Although the first original observation upon any subject connected with medicine made by an American had reference to the brain, and while America soon came to occupy an enviable position by reason of the work she had done in certain lines, the question of brain injuries and their relief had not received much attention until that accident occurred, which was first discredited in every quarter, and afterwards became famous as the "American Crow-Bar Case," in which an iron bar, weighing thirteen and a quarter pounds, and measuring three and a half inches in length, and one and a quarter inches in diameter, was shot completely through the brain. Every member of this Association is familiar with this case, as it has been widely published and commented on. You are also familiar with the remarkable fact that the subject of this accident continued with all of his faculties intact, and worked hard as a laborer for twelve years subsequent to the accident. The profession learned a new and important lesson from this case, and it served to start up a series of studies which have accomplished wonders in the domain of neurology and brain surgery.

Hardly less remarkable is the case of the nineteen-year-old boy into whose brain, through the orbit, was shot the four and three-quarter inch breech-pin of a gun, the presence of which was not suspected for five months.

Thus we see, not only how this organ may sometimes withstand extensive lacerations without serious symptoms resulting, but how it may also tolerate large-sized foreign bodies imbedded in its substance. On the other hand, the most apparently trivial injuries are sometimes followed by alarming and fatal results.

Prior to the first accident alluded to above, and for years afterwards, the brain was looked upon by the profession generally as a sacred and vital precinct wherein no surgeon dared to tread. The cranium now, however, like the other cavities of the body, is assailed, under proper precautions, with impunity. The puncturing of the brain with the del-

icate hypodermic needle would, some years ago, have been looked upon as hardly short of murderous. Now, however, for purposes of exploration, the needle, with proper care, is plunged into all parts of the brain, care being taken not to enter the internal capsule or lateral ventricles.

About this wonderfully complex organ, its powers of endurance, and the phenomena which it manifests in the presence of injuries or disease, there clings a fascination which I am afraid the unpoetical practitioner is apt to ignore. I do not think we should allow the specialist to have a monopoly of the satisfaction which a clear and comprehensive knowledge of this subject gives.

As it was the brain of Columbus which pointed the way to the achievements we this year celebrate, so it is the brain which is the power behind the throne—the throne itself—which must be given the credit of every grand achievement of man since the world began.

Every physician, at the outset of his career, should master the wondrously complex architecture of the human brain.

Among important points which we must remember when called upon to investigate brain lesions or disease is the fact that the nervous connection of the hemispheres of the brain with the body is chiefly with that of the opposite side—the right hemisphere being associated with the left lateral half of the body, and the left hemisphere with the right lateral half of the body.

It is well to bear in mind, where impaired intelligence plays a part in the diagnosis, that it is the surface of the brain which receives impressions from without; it is here that conscious appreciation of these impressions takes place; in other words, it is the surface of the brain which is the seat of conscious mental action. The more or less accurate mapping out of this area into the special centres presiding over the different functions has been of incalculable aid.

As an illustration of the accurate skill which is possible in the diagnosis of brain lesions, I recall the case reported by Dr. George Preston in the *Journal of Mental and Nervous*

Diseases for April, 1889, mention of which is also made in the 1890 issue of the *Annual of Universal Medical Sciences*.

This was a case of glio-sarcomatous tumor, the size of a hen's egg, at the base of the brain, springing from the posterior portion of the corpus callosum, attached to the falx and tentorium, and exerting considerable pressure upon the middle lobe of the cerebellum and corpora quadrigemina.

This case came under my personal observation; and although the symptoms were considered somewhat obscure by the hospital staff, there being no paralysis or loss of sensation, Dr. Preston accurately located the seat and probable size of the tumor before death. I made the post-mortem, disclosing the identical condition which had been diagnosed.

Although cases like this must invariably, perhaps, from their very nature, have a fatal termination, they stand out as strong beacon-lights, showing that our investigations along this line are on the right track.

In 1888, at the Congress of American Physicians and Surgeons in Washington, I had the pleasure of witnessing an illustrated lecture on brain localization and surgery by that eminent English brain surgeon, Sir Victor Horsley. I was much impressed at this lecture with what close and conscientious and continuous application in any branch will accomplish. In this manner Horsley has made himself, perhaps, the greatest brain surgeon living; and while I hardly presume that any of us aspire to become a Horsley, I do presume that every one of us aspires to make himself as competent a physician as his abilities and time and opportunities will permit. No man is a competent physician who does not devote some of his time to the careful study of brain and nervous diseases.

To treat this—as any other class of diseases—intelligently, we must first diagnose it. I am afraid too few of us fit ourselves to observe the important and suggestive eye-symptoms which are often of great aid; for I believe it is a fact, now recognized by all, that almost all diseases of the brain or its membranes, arising from injuries inflicted, pro-

duce pathological changes in the retina and optic nerve. For instance, all acute or chronic inflammations of the membranes produce œdema of the papilla and retina. Extravasations in the brain can often be positively determined where other symptoms are lacking by the presence of the choked disc, seen upon ophthalmoscopic examination. We find this "choked disc" in cerebral tumors—in any condition which tends to increase intra-ocular pressure. It is, in fact, one of the most positive signs of disease within the cranium.

Every practitioner who can afford it ought to have an ophthalmoscope, and should know how to use it. It is not necessary that he attempt to be an eye-specialist because he happens to possess an ophthalmoscope, but it will aid him in diagnosing many conditions besides those of the eye and brain.

In making examinations for brain disease, we will not, of course, lose sight of the patella reflex. We do not, however, make use of it to the extent which we might. The tendon reflexes are exaggerated after cerebral hæmorrhage, except temporarily, sometimes, when the hæmorrhage is sudden and profuse. They are also exaggerated after the growth of tumors, the existence of degeneration, and usually after an epileptic paroxysm.

Cerebella hæmorrhage, on the other hand, causes a diminution or total abolition of the knee-jerk. Tumors in the cerebellum also usually destroy it. Hence this symptom proves a most valuable help in the differential diagnosis between tumors of the cerebrum and cerebellum. In sclerosis of the cord, the study of the patella reflex is of almost invaluable assistance. In general paresis, of which we hear so much in recent years, the jerk affords an early indication which we must not lose sight of, as the only chance for these poor victims is to discover the disease early. The exaggerated jerk will give valuable early information.

When it comes to lesions of the cerebellum, there are no pathognomonic symptoms. Those of inco-ordination of movements, intense vertigo, and visual disturbances, are,

perhaps, the most frequent attendants of cerebellar disease.

When the medulla oblongata becomes diseased, impairments of voice and disturbances of the respiratory and circulatory symptoms afford the most important diagnostic indications.

Certain single subjective or objective symptoms often alone direct us to the seat of the lesion with more or less accuracy. Thus, anosmia, or loss of smell, in itself, would naturally be indicative of a lesion involving the olfactory or first cranial nerve. Reasoning further on the probable situation of such a lesion, we would have to place it in one of two situations—either in the anterior fossa of the cranium or in the apex of the temporal lobe, as only in one of these situations would it be able to directly involve the olfactory nerve. If in the latter of these two situations, there would most probably be other evidences of a destructive disease.

This is only a slight indication of how, in many cases, the exercise of a little clear anatomical knowledge, together with careful reasoning, will enable us to accomplish more than we thought we were able to do. Thus, for instance, again, given a case of that peculiar disease, homonymous hemianopia, in which the temporal half of one eye and the nasal half of the other is blind, we know at once that we have a case of destruction or pressure upon the optic tracts. In conditions affecting the frontal lobes, impairment of intellect and embarrassment of speech, are marked symptoms. This is why tumors so seldom, comparatively, affect either intellect or speech. They are rarely situated in the frontal region.

It is not always by any means easy to discriminate between tumors and softening; but when a certain group of more or less general symptoms, which I will not stop here to enumerate, are such as to indicate that cerebral softening is taking place, deductions of some accuracy as to the seat of the softening can often be made by the finer discrimination of certain symptoms presented. If the function of swallowing, for instance, be affected, we would conclude that the pons or medulla probably is involved in the degeneration

process. A disturbance of the ocular muscles would place the seat of softening in the crus cerebri. If word-*deafness* occur, the seat is probably in the temporal lobe of the left hemisphere; whereas word *blindness* would indicate that the trouble is probably in the occipital lobes. And thus, as I have remarked before, intelligent attention to certain important points in differential diagnosis will often throw a flood of light on conditions which we are accustomed to look upon as enshrouded in darkness and mystery.

But, you may ask, "Why appeal to the general practitioner to waste time and energy studying a condition which is fatal almost beyond the possibility of doubt?"

I answer that the very gravity of this terrible condition should make us the more eager to give it our attention. A few cases have been cured; and where one has been saved, there is hope for others.

But of all conditions, it is in abscess of the brain that the ability to properly locate is of supreme importance. The opening of a brain abscess was hardly dreamed of until lately; but now, fortunately, it is as well recognized a surgical procedure as the opening of an abscess in any other situation of the body.

The well-known maxim, to let out pent-up pus wherever found, will never be abridged. It is here again that a good knowledge of the present status of cerebral localization is indispensable.

Ranney, in his admirable "Lectures on Nervous Diseases," enumerates fifteen varieties of tumors of the brain. But of all the tumors of the brain which we should strive to recognize, the syphilitic is the most important, for it is not only by far the most frequent, but it is here that our efforts at relief meet with the most gratifying results, mercury and iodide of potassium, the old standbys, continuing to do the work well. If the potash be badly borne, calcium, in the same sized doses, is recommended in its stead.

Sclerosis of the brain, with its well-marked and constant tremor, is almost hopelessly fatal, yet certain lines of treatment have, at times, accomplished something. The same

is true of cerebral atrophy and hypertrophy, and we, as physicians, ought to be able to recognize these conditions.

Epilepsy has so long baffled the skill of medical men, remedies innumerable having so often proved valueless, and all recommended measures having frequently caused disappointment, that I am afraid, in some quarters, there has grown too strong a tendency to look upon these unfortunate patients as hopelessly afflicted.

But many cases of epilepsy can be markedly improved, and not a few permanently cured by patient and persistent care, examining carefully for any cause of reflex irritation—some visual defect frequently causes such irritation—determining if there exists any traumatic condition to account for the symptoms, and finally, watching for any local organic changes in the brain or meninges, using our knowledge of cerebral localization to locate such changes, and correcting all these, if possible, or administering such drugs as may prove the most beneficial. The bromides still hold the first place.

Trephining, properly done, under antiseptic precautions, is not a dangerous operation, and every physician ought to keep himself prepared, and be competent to relieve a traumatic pressure of the brain with the trephine.

A case in point, illustrating the benignity of the operation, occurred in the practice of a colleague of mine some months since, in which I assisted. The operation was done for the relief of a depressed fragment of the skull, from a pistol-shot, causing epilepsy, in which the relief was complete. The patient got out of bed, against his physician's advice, of course, (but it afterwards proved without any very serious consequences) on the morning following the operation the afternoon before, and rode in the cars to his home, a distance of fifty miles. I can not imagine a way in which the physician could win the gratitude of his patient more surely than by relieving him of the humiliating symptoms of grand or petit mal. Our State having no institution for the care of these unfortunates, there's the more reason why I appeal to you to give them sympathy,

and your best efforts for their relief. Whether the new treatment of emasculation will be adopted as a recognized procedure in certain selected cases, I am unable to say. Few sane patients, I imagine, would submit to the operation, no matter how desperate the situation demanding relief.

In conclusion, I wish to contribute my testimony in support of the firm belief in the advisability of using the trephine, without delay, in every case where the symptoms point to hæmorrhage, whether a fracture can be made out or not.

It is sometimes the next thing to an impossibility to diagnose a fracture where there is no depression. We know how wonderful are some of the recoveries from brain injuries; but is it not a fact that most of these recoveries are in cases where drainage is artificially produced? I remember distinctly a case occurring in my practice some two years ago. A powerful, muscular man, over six feet tall, was struck over the left side of the forehead with a policeman's club. He sank to the ground, and in a moment was profoundly unconscious, with marked symptoms of depression. The scalp was turned back, preparatory to using the trephine. There was not a particle of depression, and it was impossible to make out any fracture. Venesection was advised and adopted, and trephining temporarily abandoned. The patient died on the following day. The post-mortem showed an extensive fracture of the inner table, and that an enormous blood-clot had formed under the seat of the injury. I then and there made up my mind to use the trephine in any future case presenting symptoms of compression, when I could locate the seat of the injury.

Another case which I examined post-mortem, recently, showed a very marked similarity in point of injury to the one above; but the symptoms during life were widely different. The injury was sustained by the patient being thrown against a tree by a pair of powerful runaway horses. There was semi-unconsciousness for a few hours, after which the patient was rational, with fair prospects of recovery,

until a day or two before his death, some six weeks afterwards. No fracture could be detected during life. The post mortem showed a most extensive fracture. The whole cortex of the hemisphere on the side of the injury was degenerating, and covered with pus. The case is mentioned as showing how guarded we must be in our prognosis after brain injuries, and how few grave symptoms fatal injuries may sometimes induce.

The human brain—that vast store-house of knowledge; that limitless repository of facts; that unerring classifier of impressions; the contemplation of whose magnitude of power makes us almost tremble at our possible strength—holding worlds, as it were, under a magnifying-glass in the palms of our hands—this wondrously complex organ of our anatomy, surely deserves the profound study of every physician and scientist.

ART. VII.—Periodical Inebriety.

By T. D. CROTHERS, M. D., of Hartford, Conn.

SUPERINTENDENT OF WALNUT LODGE, ETC.

Periodical inebriety is a condition which may be observed in all sections. Persons who are apparently well and sane, will have at intervals a drink paroxysm, and do most insane acts foreign to any previous conduct, then recover and go on as before. A well-known surgeon who is very careful and attentive to all the interests of his patients, and details of treatment and operations, will abruptly neglect them and go away on some pleasure excursion, drinking largely for a week or more; then return and develop a more active interest than ever in the details of both his hospital and private practice. A business man with large exacting interests, will stop suddenly and spend several days drinking with low people to excess, both openly and concealed, and this never rouses the slightest suspicion of any thing other than sound judgment in business. He was mayor of the

town, a church member, with a large family, and his position was one of great trust.

These paroxysms had been noticed for twelve years, but for the last three years had increased in duration and the free interval had lengthened. I was requested by the company to examine this case and give an opinion of his condition, with a view of determining the wisdom of placing larger trusts and interests under his control. His family physician refused to join me in this inquiry, saying it was nonsense, that he was more sane and in better health than ever. This physician doubted all theories of inebriety, and was confident the drink paroxysm was a mere question of will-power never beyond the control of the person. I called on this man, told him my purpose frankly, and requested him to give me all the facts of his life that bore on the drink disorder. He was very courteous and nervous, and seemed to enter at once into the occasion, but gave a manifestly untrue account, both exaggerating and perverting facts without any reason or motive. He affirmed that for years he had constant communication with spirits, especially at these drink periods. The action of alcohol kept in check the coarser elements, and enabled him to have closer communion with spirits. He went away and drank to have an uninterrupted seance with these departed friends. When the end of the seance was reached, the spirits would tell him to go back to the business of life. It was evident that he had concealed delusions and hallucinations, and was mentally much enfeebled, although this was not apparent in his social or business relations.

My opinion of disease was not acted on practically; larger business trusts were placed in his hands, and a year later he developed acute mania, and died in a private asylum.

The second case was that of a physician in large practice. He had been a periodical inebriate for many years, having two and three paroxysms a year of uncertain length. He drank at home, and was in a delirium of muscular agitation most of the time, walking and riding constantly, but doing little business. He always had imaginary calls at

long distances, and after starting would forget them, and go in some other direction. He would wake up some morning, when the drink desire ended, clear, and resume his work as if nothing had taken place. Many persons supposed that in this condition of paroxysmal drinking he was very skillful, and always sought his advice in chronic cases at this time.

He always gave placebos, with vociferous earnestness, then went away bragging of the deception he had used. I examined this man and found a history of sunstroke and nervous exhaustion, and long-continued use of beer and whiskey. Then an attack of typhoid fever, in which acute delirium lasted for several weeks, followed by paroxysmal drinking. The free drink intervals were marked by great activity and reserve of manner, also inordinate appetite. My advice to give up work and all care for a long time was unheeded, and later he died suddenly, leaving his family distressed by many obligations unknown to them.

These two cases are not peculiar or uncommon. They indicate types and forms of disease not well known which should be investigated. Periodical drinking is always a most suspicious circumstance of mental failure, and the presence of paroxysmal nerve disorder that is very grave.

No one can use spirits or narcotics to excess, at times, for years, without having organic changes and degenerations.

The constant return of these drink storms are, in many respects, closely allied to epilepsy, and resemble it. They never grow less, but steadily increase, although the form may change.

Alcoholic epilepsy follows this form of drinking. Physicians who are called to these cases, especially when the paroxysm is on, should never treat them lightly. They are always very grave. Nerve and brain exhaustion, and spasmodic explosions of morbid nerve energy, are beyond the supposed power of the will to stop or control at pleasure. The case is never a mental one in the common meaning of this term; it is pathological and psychological. No matter what the appearance of health and control may be, it is unsafe to trust it.

Inebriates of this character are the unfit, and growing more so all the time. The physician is always sustained in an unfavorable diagnosis, unless the circumstances of the case are peculiar.

The special line of treatment is brain and nerve rest, and building up and control of the paroxysm when it appears. The best hope is that this nerve paroxysm, which seeks drink as a means of relief, may grow less, until final subsidence. In many cases a change takes place, and this intense desire for spirits dies out, leaving some nerve or brain entailment which is less observed. Often these paroxysms have an exact periodicity that may be anticipated. In one case, a book-publisher every six months goes to an insane asylum and remains under a lock and key for a week or more, then goes out clear and free from any morbid impulse. In almost any asylum for inebriates, cases of this kind appear, asking for restraint and help for a time to get over the "spell" as it is called, then go away restored in a measure.

Should these paroxysms, which have a distinct growth, development, and decline, be in the stage of decline when subjected to moral influences of church or temperance meetings, they become examples of marvelous cases. Or, should any special remedy be given at this period, it will always be credited with having changed or cured the case. Periodical inebriates always furnish the most misleading examples of this drink disorder.

When inebriety is studied and understood in the near future by the profession, these strange, apparently anomalous cases, will all be found to be forms of disease, masked, but moving along distinct lines of dissolution.

The supposed superior genius of these cases will be found to be stages of delirium and incapacity. The time for theory is past. The profession should take up this neglected field of medicine and teach the world what inebriety is, and what are the true methods of relief.

At present the views of moralists and theorists work great mischief to all. The most empirical confusion exists, which can only be dispelled by accurate medical study.

ART. VIII.—Chronic Endometritis, its *Ætiology*, Modern Methods in Diagnosis and Treatment.

By CHARLES G. CANNADAY, M. D., of Roanoke, Va

MEMBER OF THE AMERICAN MEDICAL ASSOCIATION; PAN AMERICAN MEDICAL CONGRESS;
AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION; BRITISH GYNÆCOLOGICAL SOCIETY
OF LONDON; PHYSICIAN-IN-CHARGE OF THE REBECCA SANITARIUM FOR DISEASES OF
WOMEN AND ABDOMINAL SURGERY.

Endometritis has been known ever since the generative organs of the female have been made a study. It has been more frequently found than any other disease of the female pelvic organs. Notwithstanding its frequency, the literature of the last few years concerning it is scant—the whole profession having “gone on a strike” for conditions demanding more major proceedings. This “craving for strong drink,” is almost satisfied, and the assertion that very soon conservative men will triumph, and the affections demanding minor treatment, so to speak, will receive more attention than formerly will be verified.

Acute endometritis will not be discussed, and only the chronic form is here referred to. Endometritis of the cervix, and endometritis of the corpus, will be considered separately. Endo-cervicitis, cervical endometritis, and chronic cervical catarrh, are appropriate synonyms for the frequent inflammation of the cervical mucous membrane.

The cervical mucous membrane is lined throughout with a single layer of epithelium—ciliated on the elevated portions; columnar at the depressed—(De Sinety.) A longitudinal mesial ridge on the anterior and posterior walls, throws the mucous membrane into numerous folds, having the appearance of arbor-vitæ, and are so termed. Küstner asserts that these folds, before puberty, pass into the corpus, but not so in multiparæ. Glands of the racemose type are found with the elongated multiple ducts extending deeply into the connective tissue dilated at their extremity; the lining of these ducts consist of a basement membrane (*membranæ propriæ*), inside of which is found columnar epithelium. This condition of the mucous membrane is found to reach to the os externum, but not to pass beyond that point;

for anterior to os externum, the epithelium has all the characters of skin, viz.: squamous epithelium in many layers resting on vascular papillæ. De Sinety, Ruge, and Veit, consider the presence of glands on the vaginal cervix a pathological condition.

Foremost in the production of this condition is, injury to the cervix in parturition. Lacerations, slight though they may be, will give a starting point. These lacerations are most frequent since forceps and ergot are so commonly used. Vaginitis may extend upward, or endometritis may extend downward, and produce the same pathological condition. Pathological changes are in proportion to the severity and duration of the inflammatory process; we have either epithelium, glands, or connective tissue involved. The epithelium in laceration is exposed, subsequently congested and inflamed, and thrown into fine folds or wrinkles, owing to poliferation of areolar tissue and distention of blood vessels, giving a granular appearance, which were considered by the older pathologists to be enlarged papillæ; but they are now known to be new formations due to areolar hyperplasia. The glands are enlarged and new glands are formed from the proliferation of epithelium; the hyperplasia occludes the ducts, and secretion from the glands are retained, forming cysts—"ovulæ Nabothi"—which may be felt as small oval masses in the cervix. These may rupture, discharging both their cubical epithelium, and also papillæ which may proliferate. With all severe types of cervical catarrh, considerable hyperplasia will be found, and more or less increase in the amount of connective tissue constituting areolar hyperplasia. Glandular patches are found, having a red appearance, extending beyond the os externum, that were considered until recently as ulceration. It is well remembered how Ruge, of Berlin, explained by microscopical appearances satisfactorily the fallacy of this supposition, demonstrating that the surface is covered with epithelium, and that the supposed ulcerated points are new formations, and have no connections with the mucous membrane papillæ.

Diagnosis is easily made, generally speaking. A digital

examination reveals a sensitive cervix—large, soft, and puffy in a multiparæ. In multiparæ we have, in addition, a patulous os, evidences of lacerations and pea-like nodules (Nabothian follicles.) From vaginal catarrh, the differential diagnosis is easily made by Schultzes' method, viz: Soaking tampon in glycerine, three parts, and tannin, one part, and inserting it against the os after having douched the vagina thoroughly. This to be left in for twelve hours. If we find pus on the tampon, the inference is that the discharge is cervical. The presence of leucorrhœa, dense, thick, opaque, and tenacious, pain in back and loins, increased on exercise and coition, irregular menstruation and sterility, are frequent symptoms.

Treatment, to be successful, requires a knowledge of the pathological condition present. Constitutional treatment tending to improve nutrition to and correct gouty, rheumatic or scrofulous diathesis, is of first importance in most diseased conditions. If the cervix is red and deeply congested, leeches may be used, or a Buttlers' scarificator plunged into it at several points, and free depletion obtained under antiseptics, followed by cotton tampons, saturated with anhydrous glycerine and boro-glyceride used every third night and let vaginal injections of water, 110 or 115° F. night and morning—using not less than three gallons with corrosive chloride of mercury, sufficient to make a solution of one to four thousand. If there is displacement, a proper fitting pessary will do much in restoring and equalizing the circulation. Lacerations should always be repaired if possible; the removal of the mucous plug and cleaning the cervical canal and applying iodine, two parts, and carbolic acid, one part, will aid much in curing the endometritis, but before this can be effected every particle of the mucus must be cleared away. This mucus is so tenacious as to render it very difficult to remove, either by curette or syringe; a method will be described under corporal endometritis for facilitating this. If ovulæ Nabothi be present, the cysts must be opened, preferably by a thermo-cautery, and the cysts emptied. If there is much

granulation tissue, many use escharotics, which should be discarded along with argenti nitras, for the reason that their effect cannot be measured, and the cicatricial contraction is generally considerable. The writer has seen A. Martin, of Berlin, perform amputation cervix for all granulations that are not easily healed—his explanation being that carcinoma was so apt to occur. Gebhardt, of Berlin, uses pyroligneous acid to erosions of the cervix with the happiest results.

Electricity may be relied on as the most efficacious line of treatment. The continuous galvanic current is used—the positive being active—the negative pole over the abdomen. An electrode is used that will accurately fit the canal, using from thirty to fifty milliamperes from five to ten minutes; Gautier, of Paris, uses a platinum electrode covered with absorbent cotton dipped in a solution of iodine, using the positive as the active pole; chemical decomposition of the solution occurs, iodine is set free at the cervix, and the current passing from the positive to the negative pole diffuses the iodine into every recess, and to the sub-mucous tissue. If there is much secretion, the use of electrodes of zinc or copper used with the negative pole—a low current being employed—and the sound kept moving to prevent its adhering, will be attended with the best results. If an indurated condition of the cervix, with narrowing of canal be present, negative application for dilation of cervix, and its softening effect on the tissues will be called for.

Chronic corporeal endometritis is an affection of the mucous membrane of the corpus uteri. The mucous membrane is composed principally of glands and inter-glandular tissue; the latter, Leopold, of Dresden, considers mainly lymphatics. Ruge, the writer remembers, classified the forms as glandular and interstitial. When simple hypertrophy is present, and glandular tissue is in excess, he terms it glandular interstitial hypertrophicæ, and *vice versa* if the interstitial is in excess; if hyperplasiæ is present, and glandular in excess of interstitial, he terms it glandular interstitial hyperplasticæ, and *vice versa* if interstitial predominates. With the hyperplastic condition, he classifies endometritis

fungosæ and hæmorrhagicæ, differentiating as either the glandular or interstitial predominates as before. Another is added—visible cystic.

While De Sinety, Klebs, Heinricus, Slavjansky, Heintzman, and Ruge may differ in their classification, still all are mainly agreed that the mucous membrane, ducts, glands, interstitial tissue, and blood vessels are enlarged, and either hypertrophied or hyperplastic elements are present. If chronic endometritis has been of long duration, atrophy will be present.

Ætiology and frequency depend on defective parturition, exposure to cold at catamenial periods, the use of sounds, gonorrhœa, and displacement.

Symptoms of chronic endometritis are menorrhagia, leucorrhœa, dysmenorrhœa, pain in back and loins, sterility, and abortions.

Diagnosis is important as distinguishing cervical from corporeal endometritis. To discover whether the discharge is from the cervix or corpus, will aid much. Schroeder's method of using tannin-glycerine on tampons to the cervix, as before mentioned, will distinguish whether the discharge is from the vagina or uterus, but does not distinguish cervical from corporeal endometritis; but, if we can remove the mucus from the cervix, and then, after the manner described by Grynfeldt, of Montpellier, direct a jet of hot water against the cervix until the uterine muscular tissue contracts, on discontinuing the douche, if corporeal endometritis is present, we will discover a muco-purulent secretion escaping freely from the cervix. This gives good results unless much hyperplasia exists, in which event, it is useless.

The method used by the writer for differential diagnosis is original, so far as he is aware, and gives as good results in hyperplasia and hypertrophy as in any other conditions. First, a small uterine electrode to the cervix is used, making it the cathode, care being taken not to insert it farther than the internal os; the inactive anode is placed on the abdomen. A current of thirty milliamperes is used for a

few minutes; the mucus is thinned and liquefied, gases evolve, and it is forced from the canal; the uses of a cotton-wrapped probe will remove what remains; a stream of tepid water cleanses the parts. The electrode is again inserted, this time beyond the internal os, to the fundus, and withdrawn slightly to prevent the point impinging against the fundus. A current of twenty to thirty milliamperes is turned on as before, and if corporeal endometritis be present, we will find the same muco-purulent fluid and gases emanating from the cervix as before; their absence will certainly indicate no active endometritis of the corpus.

Corporeal endometritis is most likely present if the catamenial flow is in excess; when there is muco-purulent discharge from the cavity, menorrhagia will almost invariably be present. The use of the curette and the examination of the scrapings with the microscope will aid in detecting large decidual cells or fragments of the villi of the chorion—and hence, tracing the cause to incomplete emptying of uterus after parturition. Or, we may find epithelial cells having many nuclei and an irregular form, signifying carcinoma or round spindle-shaped cells indicating sarcoma.

Treatment embraces: 1st. Medical; 2nd. Surgical; 3rd. Electrical.

(1.) *Medical treatment* includes correction of gouty, rheumatic, and strumous diatheses; baths, change of climate, etc., together with nutritious diet, will all materially aid the cure in most cases.

(2.) *Surgical Treatment*—When we find the mouths of the utricular glands occluded, and hyperplasia of the mucous membrane present with the fungus variety of endometritis, we may dilate the cervical canal and use a curette (the writer prefers Martin's), curetting carefully all the mucous membrane, washing out the cavity, and packing with gauze soaked in iodized phenol. The use of iodized phenol on a cotton-wrapped probe has always, in the writer's hands, been unsatisfactory, for some injury is likely to happen to the congested mucous membrane, either in its introduction or withdrawal. The use of the intra-uterine syringe is more

satisfactory, but care must be taken that only a few minims are injected.

The wholesale use of the curette should certainly be condemned, and especially when used at the physician's office, and the patient is immediately to return to her home. The writer never uses the curette, except at the patient's home, and under strict antisepsis, the patient being kept in bed for some time afterwards. The presence of pelvic peritonitis is a positive contra-indication to its employment.

(3.) *Electrical Treatment*—The writer regards this as the ideal remedy for most forms of endometritis, but it must be used with judgment, and by those experienced. Reliable instruments must be used for accurately determining the amount of current used, and a distinct motive must be in view; the proper current selected, and carefully applied under strict antisepsis, and at regular intervals. Quiet should be enjoined for several hours after each application, if the best results are to be looked for.

In simple catarrhal inflammation, where the mucous membrane is hyperæmic, soft, swollen, with excessive discharge of a clear, thin, alkaline fluid, we may effect a cure by instituting drainage. This can be effected by applying the negative pole of the continuous current to the endometrium for some time, and subsequently making active applications with the anode after the os has been rendered patulous for drainage. The mucus, or muco-purulent fluid contained in the cavity of the uterus, must be removed by thinning it with the cathode before the anode will be effectual. A current of thirty milliamperes, used every third day for eight minutes at each sitting, will generally suffice. Strict antiseptic precautions must be employed, and no force used in the introduction of the electrode that would result in injury to the endometrium. The point must not impinge against the fundus. To prevent this, it must be coated with shellac; or, after reaching the fundus, let it be slightly withdrawn before turning on the current; otherwise, the point will penetrate the fundus.

There is no doubt but that discredit is being brought on

electricity in gynecology by extremists who consider it a panacea for all pelvic ills; moreover, by another class who use it without ever having given the subject much thought or study, and expect it to yield results at once, and without any skill in its application. The writer is aware that electro-therapeutics embraces one of the broadest fields in medicine; time and expense are both essential to its successful employment; it has certain well-defined usages, and as long as it is employed in such cases as the following, which have fallen under the writer's observation, it will continue to be by those men considered useless: An ordinary family faradic battery, used both for chorea and insomnia on different patients, the same current, with sponge covered electrodes to sacrum and pubis for fibroid tumors of uterus and pelvic cellulitis, also sponge-covered electrode to abdomen, and vaginal electrode, as active, for endometritis, the continuous current being used. All the cases above reported occurred in the practice of physicians standing well in the medical profession as to ability.

As eminent a gynecologist as Sir Lyon Playfair, of London, said, in a lecture delivered to the Post-Graduate Medical School in London, in the writer's presence, that he considered that the use of electricity after the manner employed by Apostoli, of Paris, would cure endometritis in one-third the time consumed by any other method. The writer's experience in the use of electricity for the cure of endometritis has been so satisfactory, that it is employed in the conditions mentioned in this paper almost exclusively, with the result of effecting a cure in at least one third the time consumed by other methods.

An article appearing on advertising page 28, in this number, entitled "A Too Common Affront to the Profession," is of more than ordinary interest to practitioners, and we commend it to their attention.

Clinical Reports.

Case of Brain Injury—Compression—with Slight Symptoms at First—Trepthing—Recovery—Remarks.

By CHARLES P. McNABB, M. D., of Knoxville, Tenn.

PROFESSOR OF OBSTETRICS AND DISEASES OF CHILDREN IN TENNESSEE MEDICAL COLLEGE, KNOXVILLE, ETC.

Late in the afternoon of August 3rd, 1893, Hugh Rogers, a lad aged 14 years, was hit on the right side of the head with a garden-hoe, receiving a wound extending from a little in front of the parietal eminence directly downwards two and one half inches, penetrating the epicranial structure and producing a fracture of the skull in the line of the wound.

I saw the boy an hour and a half after the injury, and found him pale and complaining of numbness of the left arm and hand, and tingling of the nose, and there was, probably, a slight hesitancy in his speech. Pulse, 68; respiration, 16; temperature, 97.5° F. The pupils were moderately dilated, but responded readily and equally to light. When I began to examine the wound, vomiting came on, but ceased when I finished dressing it. A most careful examination failed to reveal any depression of bone, and the symptoms of compression were so slight, that I concluded that the inner table was not injured, and proceeded to dress the wound antiseptically. This being done, I left instructions to call me at once if the boy grew worse in the night, calling attention to the symptoms of compression and their importance.

August 4th, 9 A. M.—Patient rested well all night, and all signs of compression had disappeared. Bowels and bladder acted freely, vomiting had ceased, and no discomfort was complained of except a little soreness of the scalp-wound. Pulse still 68 per minute. Upon inquiry, I learned that the boy has had rheumatism, and examination revealed simple hypertrophy of the heart, with a presystolic rumble, merging into a mitral regurgitant murmur. This, to my mind, explained the slow pulse, and thus favored the delusion that the inner table was not involved.

The conditions remaining the same, the dressings were not disturbed until the evening of the 7th, which was the fourth day of the illness, when they were removed and the

sutures taken out—the scalp wound having united by first intention.

Some time in the early hours of the following night the boy got out of bed, and while up was attacked with severe pain in the front part of his head. Frontal headaches being a family complaint, no serious importance was attached to it. The father gave a half-grain powder of opium that had been left to relieve the pain when the injury was received, after which the boy rested pretty well, complaining, however, when he awakened, of the pain in the head.

I was called early on the morning of the 8th, and found him in a semi comatose condition, from which he could with difficulty be aroused for a few seconds only at a time. Pupils were equally dilated, and responded feebly to light. Pulse, 52; respiration, 14; temperature, 96.4°.

With the counsel and assistance of Drs. B. B. Cates and E. L. Deaderick, the scalp-wound was opened up and enlarged, and another incision, running forward at a right angle from the middle of the wound, was made, exposing, as above stated, a linear fracture, two and one-half inches long, extending from a little anterior to the parietal eminence downward into the squamous portion of the temporal bone. There was no depressed bone to be seen; so a Galt's trephine was applied near the centre of the fracture, and a disc three-quarters of an inch in diameter was removed, exposing a clot that would have filled a tablespoon. There was also a thin spicula of bone immediately beneath the disc removed that is about $\frac{1}{4} \times \frac{1}{2}$ inch in size. When this and the clot had been removed, a laceration of the dura about three-quarters of an inch long came into view, and when it was cleared of clotted blood, it was found that the brain substance was also cut or torn to the depth of about a half-inch. The inner table being broken and depressed throughout the wound, a rongeur was applied, and the entire line of fracture was cut away. For the sake of free exit for sub-dural extravasations, it was thought best to leave the wound in the dura unsutured, and after thoroughly cleansing with boiled water, a few silk-worm gut threads were placed in the wound for draining, and the upper angle and the incision were closed down to their junction with silk worm-gut sutures, leaving the lower angle open for free drainage. The wound was covered with iodoform, over which was placed several thicknesses of bichloride gauze; over this a pad of absorbent cotton, and all secured by a few turns of a roller bandage.

Six hours later, I found the boy conscious and comfortable, but complaining somewhat of numbness in the left arm. Pulse, 80; respiration, 20; temperature, 99.4°. Bowels and kidneys had not acted. Five or six ounces of urine were drawn by catheter, and a dose of Epsom salts was ordered.

August 9th, 8:30 A. M.—Patient rested well; took a glass of milk every three hours. Bowels have not acted; seven or eight ounces of urine by catheter. Pulse, 64; respiration and temperature, normal; pupils act normally; numbness in arm improving; tongue coated; some pain in the wound; dressings removed; slight sero-sanguinolent discharge. Washed out wound with Thiersch's antiseptic fluid, and dressed as before. Gave ten grains calomel and ordered one ounce salts in six hours if the bowels should not act sooner. 3 P. M., condition the same as at morning visit. Bowels have not acted; twenty ounces urine drawn by catheter.

August 10th, 9 A. M.—Patient had a good night; slept well; bowels moved several times freely; kidneys acted two or three times. Pulse, 68; temperature, normal. Tongue moist and clearing off. Numbness in the left arm improving. Wound pains some. Dressings removed and wound examined and washed with Thiersch's fluid and dressed as before.

There being no important changes in the patient's condition from this time until the evening of the 16th, or the ninth day after the operation, the events of that period will be passed over without mention. However, on the evening of the 16th, the patient became stupid and complained of severe headache, was pale, and nauseated. The pulse-rate fell below 60°, and was irregular. The dressings were removed and the wound examined. It was entirely healed, except small openings at the upper and lower angles through which the drainage-tube had passed, and a pulsating growth had sprouted through the cranial opening, and was pressing up beneath the skin. It was an ovoid mass, about $1\frac{1}{2} \times 2\frac{1}{2}$ inches, and protruded about a half inch above the level of the cranium. Its pulsations could be seen as well as felt; it was soft, and in it fluctuation was simulated to perfection. Notwithstanding there had been neither rigors nor fever, the pressure symptoms and the appearance of the mass was strongly suggestive of cerebral abscess, but this idea was soon dispelled by aspiration, which brought only a little blood. Aneurism was easily excluded, which left us with the conclusion that we had a fungus cerebri to deal with.

After again shaving the head, a small-sized drainage-tube was passed through the eye of a probe, by which it was passed in at the upper and out at the lower angles of the wound, and through this a stream of Thiersch fluid was passed daily, after which it was freely dusted with iodoform and covered with a pad of absorbent cotton, and then bandaged as tightly as could be comfortably borne. Within a few hours after this treatment was begun, the wound was discharging cerebro-spinal fluid profusely, wetting the pillows three or four times a day.

All pressure symptoms now vanished and no further pain was complained of. The wound continued to discharge cerebro-spinal fluid very freely for seven or eight days, when the drainage tube was removed, and the discharge ceased. The tract of the drainage-tube suppurated rather freely for a few days after its removal, which seemed to hasten the disappearance of the fungus. Tight bandaging was kept up until the entire jelly-like mass of profuse granulations had disappeared.

The point of special interest in the case is the comparative absence of symptoms for four days, accompanying a cerebral injury of such extent as this one. It may be argued that the clot did not form until immediately before the pressure symptoms manifested themselves, but such a conclusion is not substantiated by the appearance of the parts at the time of the operation. The clot was black and friable, and here and there particles of pus could be seen in it. Evidently the brain was, in some mysterious manner, able to stand the pressure of the effused blood, and also the wound of its substance and membranes, until the clot was invaded by the ever-present pus microbes, which speedily converted an aseptic foreign body into a depot of purulent infection and inflammation of contiguous structures was the inevitable result.

That the spicula did not produce irritation might be explained by the fact that it was completely surrounded by the clotted blood; hence, we infer that the brain was pressed away from it, and thus escaped its contact.

I was well aware of the fact that it is an established rule of surgery to trephine all punctured fractures; but, in justi-

fication of my palliative course, I would call attention to the fact that I did not, at the time, regard it as being a *punctured* fracture, and there being no depressed bone externally, and the only symptoms of any importance denoting compression (numbness of left arm, vomiting, and slow pulse,) could be reasonably attributed to less serious causes—*e. g.*, the slow pulse, which still remains, as due to the structural lesion of the heart. Vomiting began when I commenced to dress the wound, and ceased when it was finished. The wound being near the motor area for the arm (doubtless “the wish being father to the thought,”) I hoped it could be explained by supposing that a sharp concussion of that area had temporarily disturbed its function.

The subsequent behavior of this wound, and the dangerous territory passed through by my patient, will cause me to advocate an operation in every case that may hereafter come under my care if there is the slightest evidence of compression.

Case of Maternal Impressions.

By R. H. GARTHRIGHT, M. D., of Vinton, Va.

Concerning impressions from an external source affecting the fœtus in utero, I have, until recently, been very incredulous, but the following case has expelled every doubt from my mind:

May 1st, 1893.—Mr. ———, by the explosion of a keg of powder, was severely burned about the hands, arms, face, and neck.

When taken home, his wife, who had been enceinte for five months, met him calmly and, she says, without the slightest trepidation.

The day following the accident, his face was badly swollen, and his eyes closed. His wife assisted me day after day in dressing his wounds. It was three weeks before he left his room, and as many months before he was entirely well. The burns were deep in some places, and the skin came off in large heavy flakes.

In September, Mrs. ——— was delivered of a well-devel-

oped girl baby. Before removing it from under the cover, I detected that the surface was very rough, and on its being brought to light, I beheld, to my horror, a child which looked like it had been baked in an oven. The eye lashes and brows were absent, the eye lids thickened, and the conjunctival area inflamed; its left ear, like that of the father, was doubled upon itself; on its chin was a large cicatrix, and its whole face was covered with dark brown blisters: on its neck was a large abraded surface; its hands and arms seemed to be cooked; its left thumb was bent over the index finger, and the other fingers over the thumb—in a word, the child closely resembled the father when at his worst. Fortunately, the burnt skin, like that of its parent, in a few days peeled off, and the child now presents a good appearance.

Proceedings of Societies, Boards, etc.

THE TRI-STATE MEDICAL SOCIETY OF ALABAMA, GEORGIA, AND TENNESSEE.

The fifth annual meeting was held in Chattanooga, Tenn., October 17th and 19th, 1893. The session was called to order by the President, Dr. Richard Douglas, of Nashville, Tenn. The Secretary, Dr. Frank Trester Smith, and the Recorder, Dr. W. L. Gahagan, both of Chattanooga, were in place.

Dr. J. W. Russey, of Chattanooga, read a paper on

Treatment of Puerperal Mastitis.

Compression is of more general utility than any simple measure. It is both prophylactic and curative. To be efficient for the former purpose, it must be used early after labor. The chest binder of Dr. Guiteras is a most satisfactory means of applying pressure. If abscess forms, pus should be evacuated early and perfectly. Washing the abscess cavity is preferable to drainage tubes. If drainage is necessary, horse hair is preferred to rubber tubes. Care should be taken in selecting the point for incision, if circumstances admit, on account of the scar in a cosmetic point of view.

Dr. W. G. Bogart said that mastitis could be prevented by proper prophylaxis. The breast is liable to injury by manipulation. He had found only one pump satisfactory

by which the breast is steamed at the same time that the milk is drawn out. In the early stage, try abortive treatment; if abscess threatens, poultice; later, incision, cleansing with peroxide of hydrogen and pack with iodoform gauze.

Dr. G. A. Baxter, of Chattanooga, Tenn., said that the chief point is the free exit of milk; preceding this, the excessive secretion of milk is produced by improper diet. The ordinary diet should be used—a liquid diet is especially improper. As soon as there is any hardness of the breasts, anoint them with warm castor oil.

Dr. G. W. Drake believes in medical treatment, the internal administration of bichloride of mercury for the revulsive effect.

Dr. Richard Douglas called attention to the anatomy of the gland. Professor Dugas is entitled to the credit of originating the only rational treatment—that by pressure. The cause is due to the presence of micrococci. The milk forms a favorable nidus for their development.

Dr. J. A. Goggans, of Alexander City, Ala., read a paper entitled:

Treatment of Diseases of the Uterine Appendages.

In all diseases of the uterine adnexæ, rest and abstinence from sexual intercourse are necessary. The three principal points of diagnosis in disease of the uterine adnexæ are: 1st. Repeated attacks of peritonitis. 2d. Repeated hæmorrhages. 3d. Pain. Indications for operation: 1st. Those attending pelvic peritonitis, accompanied by tortuous and distended tubes, which may usually be felt in Douglas' pouch, behind the uterus. This condition may be preceded by the history and symptoms of an abortion, a gonorrhœa, or a tubal pregnancy. 2d. Physical signs of enlarged and tender ovaries due to chronic abscess. 3d. Physical signs of prolapsed and tender ovaries, accompanied by irregular hæmorrhages and incapacitating pains. 4th. Some few cases of dysmenorrhœa as the principal symptom, with a possibility of its being kept up by chronic disease of the ovaries and tubes. 5th. Where hæmorrhage is the principal symptom, accompanied by the ordinary signs of grave pelvic disease. 6th. In a few cases of general peritonitis, preceded by the symptoms of rupture of a pre-existing pelvic abscess, ovarian abscess, pyosalpinx, or abscess in the appendages developed during the progress of puerperal septicæmia, and just so long as endometritis existed, there could be no tendency on

the part of the ovaries and tubes to recover. He distinguished endometritis clinically as simple gonorrhœal and septic. Treatment given was constitutional, generally followed by local treatment, and especially tampons of 10 per cent sol. ichthyol in boro-glycerine, either with or without previous dilatation. This plan of treatment deserved serious consideration before such patients were subjected to the dangers of laparotomy.

Dr. Richard Douglas endorsed the position of the author as to the indications for operation, but each case must be decided on its own merits. Removal of appendages will not cure hæmorrhage from the uterus, the proper treatment of which is divulsion of the cervix.

Dr. P. L. Brouillette was surprised that electricity had not been mentioned. In his experience many of these cases had been cured by the use of this agent without curetting or removing the ovaries.

Dr. H. Berlin thought it a mistake to remove the uterine appendages for hæmorrhage. Electricity, applied with positive pole inside the womb, will control hæmorrhage by destroying the mucosa if a strong current is used. It would be impossible for the woman to conceive after this.

Dr. Brouillette objected that the Faradic current could stop the hæmorrhage.

Dr. Berlin said that his experience was only with the galvanic current, which was generally used.

Dr. G. W. Drake said that most physicians had not been educated to use electricity intelligently. It might relieve hæmorrhage by reflex action.

Dr. Brouillette thought that electricity should be tried before any operation was advised.

Dr. Goggans, in closing the discussion, said he was not in favor of removing the ovaries for mere symptoms—only for organic disease. Most of the general practitioners who use electricity fail to make a differential diagnosis. In the cases presented, the conditions show that no cure could have resulted from the use of electricity.

Dr. R. M. Harbin, M. D., of Calhoun, Ga., read a paper (of which the following gives the conclusions) on

Membranous Croup, with Report of Cases Treated with Tracheotomy.

1. Membranous croup is almost invariably fatal without surgical treatment, and with medicinal treatment, but little can be hoped for.

2. Any hope from an expectant plan of treatment is nil,

and the few cases that recover without surgical treatment, do not demand a consideration.

3. Tracheotomy is a justifiable surgical foreclosure, and should be performed in all cases where our therapeutic resources have been exhausted and patient is in imminent danger of suffocation.

4. It should be performed in all hopeless cases, since it either offers a chance for the patient or it promotes euthanasia.

5. I think if the operation should happen to be performed when not absolutely necessary, the patient would get well; for it is usually the complications that kill, and not the operation.

6. Statistics are misleading, and do not do the operation justice. For, if it was done earlier in the disease, after giving medicinal treatment a fair trial, and if we should eliminate the danger of infectious diseases, as diphtheria, from statistics, we would have a greater per cent. of recoveries. In our smaller towns we can easily exclude the diphtheritic complication where diphtheria is unknown. But in cities that is not the case, however.

7. The after-treatment is more important than the operation itself.

8. Tracheotomy keeps the patient alive until the pseudo-membrane resolves into a muco-purulent liquid and is expectorated through the tube

9. In all human certainty, the cases I have reported would have died without the operation.

10. That a lack of instruments is no excuse for the non-performance of the operation, for every physician can supply himself with a tube in addition to his other instruments.

As to the details of the operation, I wish to emphasize the following points:

1. That ragged edge is preferable to clean-cut incisions. The tissues should be lacerated as much as possible with point of scalpel, so as to prevent hæmorrhage.

2. Haste makes the operation more difficult.

3. The importance of keeping the tube constantly moistened with lime water and keeping the room of an equable temperature

4. That the tube should not be removed until the purulent character of the sputa ceases, which is about the eighth day.

7. The importance of applying adhesive plasters over two

small rolls of cloth, applied on either side of wound, so as to press bottom edges of wound together for the first few days, thus preventing any danger of tracheal fistula.

Dr. W. F. Westmoreland thought the surgeon was generally called too late. Tracheotomy, in itself, is not a dangerous operation. He had used cords, fastened in the edges of the wound, and tied behind the neck, and thought this practice resulted more favorably than with the use of the tube.

Dr. H. B. Wilson, while in the Children's Hospital, New York, treated twenty-two cases of diphtheria, and all of these died except two, in which tracheotomy had been performed; in another epidemic, out of forty cases, there were but few deaths.

Dr. Frank Trester Smith thought the operation of little danger. In the statistics, death is ascribed to the operation instead of the cause for which it was performed. Where tracheotomy was performed for foreign bodies, the statistics are good. The operation adds but little to the danger of the patient.

Dr. H. Berlin said that experiments on dogs in which croup had been artificially produced, showed that the effects of early operation were good. There was little danger from the operation itself.

Dr. G. A. Baxter, of Chattanooga, read a paper entitled:
Treatment of the Omentum in Hernia Operations,

In which he advocated the removal of the redundant omentum, and reported a case in which a very large hernia consisting only of omentum was removed, weighing four pounds. The omentum was shown; also the patient.

Dr. W. F. Westmoreland thought the omentum could be removed in toto without affecting the patient at all, unless it might be from hæmorrhage or adhesions. And if any difficulty in reducing omentum, it should be resected, or if there is any suspicion that the vitality is effected. In cases of hernia of the omentum, the tissue would hypertrophy.

In answer to a question, the patient stated that the growth had enlarged suddenly.

Dr. H. Berlin stated that in the cases where the omentum protruded as here, the structure was changed, and it became a lipomatous growth.

Dr. J. A. Goggans agreed with Dr. Berlin, as to the pathology of the case. The omentum should be cut off whenever it protrudes.

Dr. Richard Douglas raised the point that the stump should be tied in sections, not as a whole. He preferred silk to catgut. Kangaroo-tail tendon was better fitted for sutures than for ligature.

Dr. Baxter, in closing the discussion, said that the tumor was composed of areolar tissue, filled with fat. The kangaroo tendon was not too stiff for tying the stump.

Serous and Watery Discharges during Gestation, their Source and Significance.

Dr. J. R. Rathmell, of Chattanooga, believes it a mistake to accept the theory that these discharges are from the amniotic sac. Rupture of the sac is always followed by the expulsion of the fœtus. There are two other sources from which these discharges can come; 1st, from the cervix; 2d, from the decidua. Cases are related from the writer's observation, illustrating these sources.

Dr. J. B. Cowan said in one case in his experience he thought the discharge came from a hydrosalpinx. There had been an occasional gush of water after the pregnancy.

Dr. Richard Douglas said that hydrorrhœa is frequently met with in women who have had syphilis or gonorrhœa. When the amniotic sac is opened, it is followed sooner or later by expulsion of its contents. If the fluid is amniotic, it will contain urine; otherwise not.

Dr. G. A. Baxter related a case in which there was a large flow of amniotic fluid following a fall. He delivered the woman of a dead child, five months later. A partial rupture is not always followed by expulsion of the fœtus. He thought a chemical analysis would determine whether the fluid was amniotic.

Dr. George R. West stated that a serous discharge from the cervix might be from a cancerous condition.

Dr. Rathmell thought that it might be possible in the early months of pregnancy that the discharge might come from the tubes. None of his cases ever suffered from gonorrhœa.

Dr. R. M. Cunningham read a paper on *Recent Observation of Croupous Pneumonia, with Special Reference to Prophylaxis and Treatment*. [See page 791.]

Dr. G. A. Baxter believed the remedies of the past of little value, and Dr. Cunningham has made a discovery of value to the world. It was the chloride of sodium which affected the condition of shock, not the filling the tissues with a solution.

Dr. P. L. Brouillette wanted to defend his favorite treat-

ment, with carbonate of ammonia. In thirteen years, treating, perhaps, fifty cases a year, he had never lost a case; regarded the disease as a mild disorder.

Dr. Willis F. Westmoreland thought that the paper showed that the use of the saline solution not only buoyed the patient temporarily, but was of permanent value. It probably has some effect on the blood itself.

Dr. H. Berlin thought perhaps Dr. Cunningham's cases were not simply croupous pneumonia, but that other micro-organisms might be present. Ordinarily, saline solutions are used to fill up the vessels when they are empty from loss of blood.

Dr. Cunningham thought that the chloride solution would supply something to the blood in which it was deficient. Statistics show that the mortality in this disease was enormous.

A paper on *Some of the Diseases of the Female Urethra*, read by J. C. LeGrand, of Anniston, Ala., related cases in which relief had been experienced from treatment, and others in which no treatment was of avail.

Dr. W. Frank Glenn, of Nashville, read a paper on the **Treatment of Septic Bubo.**

He treats the cause—gonorrhœa or chancroid—and makes direct applications to the glands. He advocates rest, the application of ice, the injection hypodermically of 1 per cent. solution of benzoate of mercury, and a compress bandage; when suppuration has taken place, free incision, etc. It would be best to excise the gland as quick as it becomes inflamed. After suppuration the case must be treated as a chancroid.

Dr. R. M. Cunningham thought it best to remove the gland, and, if possible, get union by first intention.

Dr. J. W. Handley had not gotten good results from excision.

Dr. R. J. Trippe thought extirpation of the gland the best treatment in all cases of septic bubo, even after suppuration has begun. The patient being anæsthetised, it is little more trouble to remove the entire gland, and thus leave a clean wound that will heal by first intention, than to incise and curette. After extirpation, the pain amounts to nothing, and recovery is much more rapid.

Dr. H. Berlin said that a clean excision was better than incision with curetteing, etc.

Dr. Glenn, on the whole, was opposed to excision except in the early stage. He does not believe in aspirating.

Dr. J. B. Murfree read a paper on the *Diagnosis and Pathology of Fractures near the Elbow Joint*.

Dr. T. Hilliard Wood, of Nashville, read a paper on *Pathology of the Sequelæ of Purulent Inflammation of the Middle Ear*.

Dr. G. C. Savage, of Nashville, read a paper on *Treatment of the Sequelæ of Purulent Inflammation of the Middle Ear*, in which he advocated measures preventive of the sequelæ of inflammation of the middle ear, outlining his treatment: for the relief of pain, the free and frequent use of a solution of chloroform in olive oil, one dram to seven, allowing the solution to remain in the ear ten minutes at a time; when there is a discharge, the use of a warm solution of peroxide of hydrogen, letting it remain in the ear until bubbling ceases, and repeating this as often as there is any bubbling. For mastoiditis, he recommended, in addition to the above, Wilde's incision, and if this did not relieve, opening of the mastoid.

Dr. N. C. Steele wanted to impress the importance of attending to cases of suppurating ears.

Dr. L. B. Graddy said that the use of olive oil alone is as efficient as with chloroform. Boracic acid renders the tissue a poor soil for the growth of the micro-organisms, and is a good remedy. Peroxide of hydrogen is harmless, but of no use.

Dr. W. F. Westmoreland said that in mastoid cases the operation was postponed too long. In a certain class of cases, operation is necessary. No case of abscess of the brain ever recovered without operation. Without proper drainage the use of peroxide is dangerous.

Dr. B. F. Travis had used chloroform spray in his own person with good effect. He used bichloride, nitrate of silver solution, free irrigation and thorough drainage.

Dr. Willis F. Westmoreland, of Atlanta, read a paper on—

Treatment and Prognosis of Fractures About the Elbow.

He flexes the arm at a little more than a right angle, in a position of rest. This is the best position to prevent deformity. In fractures of the olecranon process, it is not best to extend the arm fully. He uses plaster-of-Paris bandage.

Dr. G. A. Baxter said that there was almost always impairment of motion and deformity. He uses passive motion after a few days, extending the arm at first; later putting it in a flexed position.

Dr. Richard Douglas said that Baxter's position was weak

in first putting up the arm in extension; later in a flexed position. Passive motion was a thing of the past. By approximating the fragments, we use the best means to prevent ankylosis.

Dr. R. M. Cunningham believes in putting up the fracture, waiting for union, and then breaking up the adhesions.

Dr. Murfree said that absolute rest was necessary to insure repair of the bone.

Dr. Westmoreland said that ankylosis might be produced by massage in certain conditions. All who put up the limb in extension acknowledge that it was wrong by changing the position. It required more skill than most practitioners possess, to put on a plaster-of-Paris bandage properly.

Dr. Richard Douglas delivered the President's address on *Responsibilities of the Abdominal Surgeon*.

Dr. W. E. B. Davis, of Birmingham, Ala., read a paper on—

Treatment of Stone in the Biliary Ducts.

He advocated, when difficult to remove calculi from the common duct without incising the duct, after making the incision, if it was very difficult to stitch up the duct, and if the patient's condition would not warrant a long operation, to introduce a glass tube and pack around it with iodoform gauze, without attempting to repair the duct. These cases are usually in a bad condition to stand a prolonged operation.

Dr. Paul F. Eve, of Nashville, in a paper on

Cholecystotomy,

advocated removal of calculi whenever detected, and described the operation.

Dr. W. C. Townes said that three cases where he had made the diagnosis of gall stones, had been relieved by large doses of olive oil. If medicinal measures did not relieve, operation should be resorted to.

Dr. J. B. S. Holmes advocated operation if medicines failed to relieve. If the tube was occluded between the stone and intestine, he would use Murphy's button to produce anastomosis between the duct and the intestine.

Dr. Richard Douglas believes that the operation of producing anastomosis between the duct and intestine a flimsy procedure.

Dr. J. A. Goggans related a case in which floating kidney had been diagnosed, but which turned out to be a case of gall stones.

Dr. R. M. Cunningham related a case where operation had been advised, but the attacks ceased after the administration of large doses of olive oil.

Dr. W. G. Bogart had had good results from the use of oil, but would not rely upon it. He would operate in case of impaction.

Dr. G. C. Savage said that the mistake made by those who used oil was that they did not put chloroform in it.

Dr. Davis said that these cases do not get well, as a rule, without operation. The operation should be short, or the patient will die from the shock. You can never know that the last stone has passed.

Dr. Frank Trester Smith presented a case in which there had been *Prolapse of the Iris*, which had been partially reduced by pushing it in with instruments, and the reduction completed with the use of eserine.

Dr. J. W. Handly, of Nashville, read a paper on the
Treatment of Varicocele.

He laid stress upon the use of a well-fitting, properly adjusted suspensory as a most excellent palliative. In milder cases, besides the above, he gives sound physiological advice as regards sexual habits and constipation. Mentions other palliative measures only to condemn them. Describes briefly earliest operations by Vidal de Cassis and Sir Astley Cooper, afterwards giving at length the operations of Keyes and Bennett, the ones now generally practiced.

Dr. W. Frank Glenn advised operation unless very small. If left to themselves, atrophy of the testes may result. If a suspensory is used, it should be well fitted. He sees no use in excising the scrotum.

Dr. J. A. Goggans thought most cases were due to masturbation, and would give general constitutional treatment, amputate the scrotum in mild cases, and in severe cases do an open operation by ligating all the veins but one, supplemented by amputations of the scrotum.

Dr. Paul F. Eve said that the spermatic artery and vein should not be ligated or atrophy of the testicle would result. He believes in removing the redundant scrotum.

Dr. W. F. Westmoreland removes the excess of scrotal tissue. He expects to get union by first intention.

Dr. R. M. Cunningham had examined several thousand men, and had found not more than half a dozen with varicocele.

Dr. W. C. Townes thought the condition more frequent among the wealthy, due to upholstered chairs and sedentary

habits. Dr. Cunningham's cases were from lower classes. He would give tonics and use a suspensory in cases not demanding an operation.

Dr. J. R. Buist thought Dr. Cunningham's statistics due to the fact that most of his cases were negroes.

Dr. Eve stated that a United States recruiting officer had stated that out of twenty cases examined in one day, eighteen had enlarged scrotal veins. He thought his statement, that seven out of ten males had a tendency to varicocele, within bounds. All these were not operable cases.

Dr. Handly, in operating, would prefer local anæsthesia, unless the patient was very nervous.

Dr. L. B. Grandy, of Nashville, read a paper entitled:

Etiology, Pathology and Prevention of Ophthalmia Neonatorum.

The etiology and pathology the same as gonorrhœal ophthalmia or gonorrhœa of the urethra, being produced by the gonococci—all of these cases are produced by inoculation. Every abnormal discharge, toward the end of pregnancy, should be regarded with suspicion. These cases are inoculated during the washing. He recommended that the lids be washed by a 1 per cent. solution of nitrate of silver, which should be left on the lid twelve seconds, after which the eyes should be washed with clean water.

Dr. B. F. Travis read a paper on

Treatment of Ophthalmia Neonatorum.

In the early stage he advises cleansing the eyes with a boracic acid solution and the application of cold water. Later the use of strong solutions (40 to 60 grs. to ounce) of nitrate of silver in the purulent stage.

Dr. G. C. Savage stated that there were cases on record where pus gushed from between the lids when they were first opened. He believed that other fluids than gonorrhœal would produce purulent conjunctivitis. Crede's method is effective and apparently painless.

Dr. Frank Trester Smith uses cold in the early stages by the application of ice cloths. Later, silver solution, 5 or 10 grains to the ounce, will cure the discharge, but will take more time than with stronger solutions, but this method is safer. In rare cases the strong solution will promote ulceration of the cornea.

Dr. Cunningham called attention to the fact that the negroes rarely were blind from this disease.

Dr. N. C. Steele endorsed the use of strong solutions of silver, 40 to 60 grains.

Dr. E. L. Jones had never seen a negro blind from ophthalmia neonatorum.

Dr. J. B. Murfree said that the disease was frequent in the negro in Middle Tennessee.

Dr. L. B. Grandy uses ice compresses in the early stage. When purulency begins, nitrate of silver should be applied with a cotton wrapped on a toothpick, applied to the whole conjunctiva.

Dr. J. B. S. Holmes, of Rome, Ga., read a paper on **Movable Kidney.**

Pressure on the kidney always produces nausea and faintness—this is an important point in diagnosis. If much disturbance, and kidney cannot be kept in place with a bandage or an abdominal support, the kidney should be extirpated. The operation was described. We should be satisfied that the other kidney is in a healthy condition.

Dr. J. R. Buist had tried bandages and trusses without success.

Dr. W. E. B. Davis called attention to the difficulty of diagnosing between the gall bladder and movable kidney.

Article IV of the Constitution was changed so as to allow the Society to meet elsewhere.

Officers-Elect.—*President*—Dr. J. B. S. Holmes, Atlanta, Georgia.

Vice-Presidents—Drs. James A. Goggans, Alexander City, Ala.; Daniel H. Howell, Atlanta, Ga.; T. Hilliard Wood, Nashville, Tenn.

Councillors—Drs. W. E. B. Davis, Alabama; G. W. Mills, Georgia; J. B. Murfree, Tennessee.

Secretary—Dr. Frank Trester Smith, Chattanooga, Tenn.

Treasurer—Dr. W. C. Townes, Chattanooga, Tenn.

Recorder—Dr. W. L. Gahagan, Chattanooga, Tenn.

Dr. Y. L. Abenathy, of Hill City, read a paper on

The Treatment of Typhoid Fever.

It is impossible to diagnose between typhoid and continued malarial fever in many cases. He believes in an aggressive form of treatment, and advocates the use of quinine and mercury in these cases. He also relies on hydrotherapy by the Brandt method.

Dr. J. B. Cowan could not endorse the use of quinine. His sheet-anchor is alcohol, using it as coal in a grate, to allow the man to burn this instead of burning the tissues. He gives salicylates in small doses—three and a half grains. He had not seen a case of typical typhoid fever in fifteen years.

Dr. G. T. Prince said that a typical case of typhoid was rarely seen. The treatment must be varied according to the type. In perforation, laparotomy should be performed. By using potass. bromide first, he could use quinine.

Dr. P. L. Brouillette believes the cold bath the best antipyretic, prefers using first a tepid bath and reducing the temperature of the water. Quinine must be given in large amount within an hour to get antipyretic effect, as it is eliminated.

Dr. Willis F. Westmoreland said that tepid baths were less depressant than the cold baths.

Dr. R. M. Cunningham said that we have typical and atypical typhoid fever; typical and atypical malarial fever; and an unknown fever that I call continued. Baths are best antipyretics; whiskey and strychnine best stimulants. Of 434 cases of fever observed in four years, eighty were typhoid—ten deaths, eight complicated; 178 continued—two deaths, both complicated; 176 uncomplicated fevers—no deaths. Does not believe in antiseptic treatment. As routine treatment, he uses the mineral acids.

Dr. W. C. Townes read a paper entitled

Pathology and Treatment of Goitre.

This paper was suggested by observing many cases while "tramping" among the Alps of the Tyrol and Switzerland this last summer. He thinks the gland secretes a colloid substance which aids in blood-making. Etiology of goitre is not established. He describes the histology and the naked-eye appearances of the gland. The tumors are benign—are hypertrophies and hyperplasias which undergo mucoid changes. May become cystic, then the growth is quite large. The treatment is prophylactic, with iodine of some form in the beginning. Later, the results of many observers show that the removal of the goitre should be practiced. Suggests a trial of the ingestion of the gland of the sheep, quoting from Kinnicutt.

The following is a synopsis of a paper by Dr. C. W. Barrier, of Columbus, Ga., on

The Elastic Dressing Applied to Incomplete Ankylosis of the Knee.

After a description of the elastic dressing, and method of using it, he gave the indications for the treatment of such a case:

I. Arrest the atrophy of the synovial membrane and restore it to its function.

II. Break up existing adhesions and prevent the formation of others.

III. Restore the tendons of the hamstrings to their normal length.

IV. Arrest atrophy of the tendon of the quadriceps, and stimulate it to antagonize the hamstrings.

He concluded by showing how these indications are met better by the elastic dressing than by an operation or a fixed dressing. If such dressings were more frequently applied in incipient ankylosis, would there not be a less number of cases of complete ankylosis, and still fewer radical operations for the same?

Dr. R. J. Trippe had had good results from breaking up adhesion under an anæsthetic. This, however, may have to be repeated. Ankylosis should be prevented, if possible, always.

Dr. H. Berlin related his experience with the
Action of Galvanic Current on Uterine Tissue.

A current was passed through the uterine tissue, which was then subjected to microscopic examination. In one case, the experiment was made on the living subject previous to hysterectomy; in the other cases, on the cadaver. He concluded that the only effect was the destruction of the mucosa, and that curetting would accomplish the result much more quickly.

Dr. Geo. R. West said that, according to experiments, electricity acted, not only at the poles, but also throughout the tissue.

Dr. W. E. B. Davis believes that electricity has its place in gynæcology, but that many claim too much for it. Curetting is preferable, although the same result might be accomplished in many cases by electricity.

Dr. J. B. Cowan thought the current was used in a milder form than to produce necrotic tissue.

Dr. W. F. Westmoreland, after spending much for electrical apparatus, had concluded to let it alone in most cases.

Dr. G. W. Drake said that electricity had accomplished most by those who had studied the subject. It should not be condemned from the reports of those who did not understand its use.

Dr. J. P. Stewart thought that there was no doubt of the tonic effect of electricity.

Dr. H. Berlin said that he only wanted to prove the microscopical effect of the current, and had found necrosis; had no effect from Faradism.

Dr. J. B. Cowan, of Tullahoma, Tenn., made an address on *Medical Ethics*.

Dr. W. F. Westmoreland thought the profession had reached that point where the Code of Ethics, as a published document, should be abandoned.

Dr. G. A. Baxter said that a consultant could steal a patient within the Code of Ethics.

Dr. J. R. Rathmell believed in a written Code. The Code is a statement of the principles which are the written result of the experience of the profession.

Dr. J. P. Stewart said the written Code was of value to protect us from those who violate it.

Dr. G. W. Drake said that any argument for abolishing the Code would apply equally to any written law, even to the Word of God. We object to consulting with irregulars, not on account of their method of treatment, but on account of advertising.

Dr. Y. L. Abenathy stated a Code is needed for violators of the law.

Adjourned to meet in Atlanta, Ga., on the second Tuesday in October, 1894, when a proposition to change the name to the Southwestern Medical Society will be considered.

SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION.

[We regret very much that want of space compels the limitation of our report in this issue to the synopses of but three of the many excellent papers or addresses presented during the session held in New Orleans, La., November 14-16. Other papers or synopses will follow in subsequent numbers of this journal.—EDITOR.]

The Southern Surgical and Gynæcological Association—Its Origin, Objects, and Aims.

Dr. Bedford Brown, in the beginning of his address as President, alluded to the assembling, in Birmingham, Ala., six years ago, of a small but determined band of Southern surgeons, amidst doubts and anxieties, with many difficulties ahead, to found a Southern Surgical and Gynæcological Association; and notwithstanding the opposition and discouragement of many distinguished surgeons of the South, the Association, by the indomitable energy of its members, has prospered and succeeded beyond expectation. He em-

phasized the importance, in laying its foundation, of selecting a distinguished and able leader, and that was accomplished by the election of Dr. Hunter McGuire, one of the most eminent surgeons in our country. Thus the Association started out under propitious circumstances, and has continued to grow since that time. He spoke of the material selected to compose the Association, which is composed of three classes—one, the skilled specialist; then the general practitioner, who practices surgery and gynæcology; and, finally, the promising young surgeon or gynæcologist, of education and character. He dwelt with much emphasis on the high standard of qualification and moral character as essential to an entrance into the Association, and the great good that a strict adherence to these rules has accomplished in maintaining the elevated reputation of the organization.

The true intent, he said, in founding and building this Association was educational and developmental of Southern surgery. He alluded to the fearful condition of the South after the war; its almost hopeless state of ruin, poverty and depression, and the impoverished and depressed state of the medical profession, and paid it a high and deserved compliment in not only raising itself up from the wreck and ruin of war, but the aid it has afforded the Southern people by example and practice in the recuperation and restoration of Southern affairs. He also gave due credit to the medical societies, State and general, for their agency in this grand and important work of medical progress in the Southern States.

Dr. Brown alluded to the importance of modern specialism, as the outcome of division of labor, which is the basis of progress in all things—the arts, sciences, in medicine, law, and in nature's operations; and, in speaking of the beginning of specialism in this department, paid a glowing, beautiful, and deserved tribute to the immortal Marion Sims—the ideal specialist—his wonderful accomplishments and superb character.

Dr. Brown called attention to the broader and more democratic character of the Southern Surgical and Gynæcological Association than the more special associations of the country. The Southern Surgical and Gynæcological Association is composed of major gynæcologists or skilled specialists and minor gynæcologists. This arrangement, he believes, adapts it specially to the wants and necessities of the sparsely settled Southern States. He makes a strong

plea in support of this arrangement. As there cannot be skilled specialists in every town and village of the South, yet there are thousands of suffering women throughout that thinly populated section who require special treatment, but who have not the means to bear the heavy expenses of a sanitarium. Those general practitioners, many of whom are men of the highest character and education, and with enviable reputations in their communities and States, who practice minor gynæcology, are engaged in a good and laudable work throughout our Southern States, and deserve the commendation, the respect, and encouragement of our profession for their valuable services in behalf of humanity.

Dr. Brown heartily endorses the original action of the Association in encouraging this worthy class of men by receiving them and giving them the right hand of fellowship.

In this Association, the minor gynæcologist, when accepted on the merits of his character, standing, moral worth and education, is brought into intimate contact with the skilled and learned specialist, on an equal footing with all the advantages of intimate relationship. In this arrangement, he believes, is to be found infinite advantage, as the specialist becomes the educator, while the minor gynæcologist becomes the learner, and in this way a correct knowledge of surgery and gynæcology is being disseminated among the medical men of the South, and the great science of surgery is being improved and built up among our people.

He dwelt with pleasure on the admirable amenities, the high gentlemanly bearing, the courtesy, the confidence, the friendship and strong ties existing between the members of the Association. He believed that the Association is utterly devoid of all sectional purpose or intention, and that distinguished men from the far North and South here mingle together on common ground and in all the amenities of confidence and good fellowship. And lastly, he was deeply impressed with the noble work this Association is accomplishing in building up surgery and gynæcology in our own impoverished Southern States, and in promoting Southern progress. And in conclusion, earnestly exhorted the Association, not only to adhere unswervingly to the high standard of qualification, morally and intellectually, as necessary to constitute membership, as being the true basis of prosperity and success, but as indispensable to the accomplishment of great objects. With equal earnestness he urged the As-

sociation, now that it has attained success, eminence and respect of the profession of the nation, not to relax their efforts and labors, and impressed it upon them that it is as difficult to maintain success as to attain it.

Dr. J. McFadden Gaston, of Atlanta, Ga., read a paper on **Operative Procedure for Carcinomatous Tumors of the Breast.**

It is held by most observers that cancer of the breast is primarily a strictly local trouble, and if removed at an early period, must be eradicated. But either the tumor has, from the outset, a proclivity to reproduction, or comparatively few cases are operated on sufficiently early to arrest their progress, as return of the neoplasm is the most frequent result of operations for the removal of carcinomatous tumors of the breast. This holds in regard to the complete as well as the incomplete mode of operating in these cases, and in those patients, without enlargement or induration of the axillary glands, there does not appear any good and sufficient reason for the invasion of this region by the knife. There are no indications of trouble beyond the limits of the breast, and under such circumstances it must prove very difficult, if not quite impracticable, to identify the lymphatic glands and remove them. Even in a case of involvement of the ganglia in the clavicular space, it is problematical whether the shock of enucleating them may not overbalance any advantage which can accrue from their removal.

Dr. Morton claims that all mammary cancers may be divided into four classes. (1) Those in which the disease has not only infected the axillary glands, but by metastasis or otherwise has involved the internal tissues and organs; (2) in which these glands have become infected, but the disease has gone no further; (3) metastases have occurred without infecting the glands; (4) disease as yet limited to the mamma. Cases of the first class are plainly not operable. The second, if clearing out the axilla and removing every gland in the whole neighborhood of the diseased breast and the tissues around them, as well, were to complete the operation, it would be justifiable, provided the mortality after the procedure is not too great.

The statistics of local recurrences given by Gross in 1888 (quoted by Morton) are as follows:

Four hundred and nine cases, partial or total extirpation of mamma, without glands, 96 cases; recurrence in or near cicatrix, 46 cases, or 47.91 per cent.; recurrence in cicatrix

and glands, 31 cases, or 19.79 per cent.; recurrence in glands alone, 19 cases, or 32.29 per cent.

Amputation of breast with removal of glands, 313 cases; recurrence in or near cicatrix, 235 cases, or 75.08 per cent.; recurrence in glands alone, 38 cases, or 12.14 per cent.; recurrence in both places, 40 cases, or 12.77 per cent.

These figures, Morton believes, show the impossibility of doing any operation that deserves to be called "completed" after invasion of the axilla has taken place. The number of local foci so far from being diminished, is certainly very much increased. These facts, taken with the other very important fact that the immediate mortality after the "completed operation" is double (statistics of Butlin) that after the incomplete, seems, to Morton, to utterly condemn the former as a life-saving measure in this class of cases.

The third class of cases, in which metastatic tumors have occurred, without antecedent glandular involvement, are clearly not amenable to operation.

The fourth class embraces those cases in which the cancer is as yet strictly local, and hence eradicable by operation.

Morton thinks that after the axillary glands have once become involved, it is highly improbable that the disease can be eradicated by any surgical procedure. Whenever a breast is the seat of a malignant tumor, whether wholly or partially involved, there should be no hesitation about removing the entire glandular structure. If a part of the mammary gland only seems involved, and it is evident the knife can be carried outside of the neoplasm into the apparently sound tissues of the breast, there is every reason to believe that if any portion of the gland is left it may become the seat of disease, and that recurrence will most likely follow the operation. On the other hand, an entire ablation offers better prospects of success.

In most cases saliency of the tumor admits of making a double elliptical incision, so as to take away the adherent cutaneous covering with the diseased breast, and all the skin which is loosely attached by cellular tissue may be safely preserved to cover the wound without undue traction. Retentive ligatures, at the distance of an inch or more from the margin, may be inserted at the points of greatest tension, and between them broad strips of adhesive plaster may be placed to secure union of the edges. If cancer of the breast returns after removal, it is calculated by most writers to operate as often as the growth appears, and thus the life of the patient is prolonged.

The great suffering inflicted by escharotics in treatment of malignant growths is an objection of great moment, and yet, with the use of morphine, the pain is so far mitigated as to become bearable. In a recent treatment of epithelioma of the nose, advanced to the ulceration stage, involving the ala and septum, the pain from destructive action of the Vienna paste at the outset and the arsenical paste subsequently, required the free use of hypodermics of morphine and atropia to enable the patient to submit to their applications. He seems to be now free from disease after destruction of almost the entire nose.

The relative advantages of the knife and cauteries in the management of carcinoma depend very much upon the progress of the disease. In the incipency of the local trouble there can be no doubt in regard to the excision being preferable, but after development of a tumor with tendency to degeneration and breaking down of the structure, resort to escharotics has its advantages in extending to the remote ramifications of the disease. It is a prevalent impression that certain caustic applications attack the diseased structure without affecting the sound tissues, and that the so-called roots of a cancer are thus destroyed. There seems to be some just foundation for this belief in regard to application of arsenic, but the destructive effect of caustic potash in the form of Vienna paste extends to every vital structure with which it comes in contact, and the same holds in reference to the plaster of sulphuric acid and charcoal as an escharotic. Chloride of zinc application is not accompanied with so much pain as the previous named escharotics, and yet does not prove so effective, owing to its less destructive agency.

Quite a number of vegetable products have been likewise employed, but are not so prompt and radical as the chemical escharotics; as a consequence, they require a longer time to bring about the disintegration of the morbid growth.

The treatment of carcinomatous tumors of the breast with caustics has been tested fully by Bougard, of Belgium. His paste contains chloride of zinc, arsenic, cinnabar and corrosive sublimate. Of 160 cases, 62 or nearly 40 per cent. were free from recurrences three years after treatment.

Bougard's experience leads to the inference that there is something connected with the escharotic application in cases of carcinoma, which is more pervading and far-reaching than simple excision with the knife. As this cauterization does not look to the dissection of the glands from the axilla

or clavicular region, it seems that this is not requisite to secure the most favorable results.

Traumatic Popliteal Aneurism—Death.

Dr. R. M. Cunningham, of Ensley, Ala., owing to the lateness of the hour, did not read a paper, but reported a case of popliteal aneurism coming under his observation. A large, healthy, robust negro, with good family history, but with a personal history of syphilis, about one year before coming under observation, was shot in the popliteal space with a 32-calibre pistol ball, the latter ranging inwards and lodged in the inner aspect of the knee joint. The wound gave him no trouble, and got well promptly. A few months afterward, he complained of pain in the space, particularly on motion, and noticed a pulsating swelling. The symptoms increased, and the size of the swelling also augmented. At the time of examination, a pulsating tumor, the size of a pullet's egg, could be felt in the popliteal space. The bruit in this tumor was prolonged, and had a very peculiar quality. The walls were apparently very thin, and rupture seemed imminent. A varicose aneurism was suspected. Patient placed in hospital, put on restricted diet and iodide of potash. Ten days later, superficial femoral was ligated at the apex of Scarpa's triangle. Pulsation immediately ceased; the limb got cool; afterwards almost natural warmth established. On the sixth day, a small gangrenous spot was found over inner condyle; at the bottom of the slough was the flattened bullet. A few days later, gangrene of the entire extremity below the knee supervened. The thigh was amputated at middle third, the patient dying from shock in twelve hours. The aneurism was an arterio-venous or varicose aneurism. The proliferated wall was very thin, the periosteum having to be removed to dissect away from the bone. There was no fibrinous deposit in the adventitious sack nor recent clot. It was entirely empty. The artery was open below and above. The ligation wound had entirely healed by first intention. This case teaches the uncertainty of exact lesion in such cases, and of the result also. The proper operation would have been the ligation of the artery and vein at the site of injury. The gangrene was probably caused by the return of the collateral circulation via the opening in the vein.

MISSISSIPPI VALLEY MEDICAL ASSOCIATION.

Session in Indianapolis, Ind., Oct. 4-6, 1893.

Dr. Albert E. Sterne, of Indianapolis, read a paper on—
Syringo-Myelia.

The pathological anatomy of the fissures and cavities existing in the spinal cord was first dwelt upon. Specimens demonstrating the diseased conditions of the cord were shown with the aid of microscopes and stand-loops. All, except two of spina bifida, were taken from a series of sections of a typical case of "gliosis spinalis," showing marked "peri-ependymal sclerosis." This last-named condition was considered of special import as regards the etiology of the affection. The symptomatology was then discussed, and an attempt made to reconcile the peculiar clinical aspect of syringomyelia with the spinal lesions ordinarily found.

Many affections of the nervous system were differentiated from the subject under discussion. It was maintained that "Morvan's disease," or "painless whitlows," was simply a subdivision of gliosis spinalis, where the vaso-motor-trophic disturbances were predominant. "Acromegaly" was also considered as a type of this spinal condition. The essayist did not, however, believe in an intimate connection between syringomyelia and leprosy.

Farther research in countries infected by this latter disease must decide as to the relationship between the two affections. At present this relationship seemed purely hypothetical.

In discussing the *etiology* of the allied conditions of hydromyelia and syringomyelia, special attention was called to the embryonal condition of the spinal cord. The pathological anatomy rested, in every case, upon the basis of congenital mal-distribution of tissue, or to "arrested development." In support of this view, were cited the preference shown by the gliomatous process to develop about the central canal. "Peri-ependymal sclerosis," and in the central parts or cusps of the posterior tracts of Goll and Burdach, those regions of the cord normally the latest to attain full growth. The central canal, normally very small and single, remained under certain, to us unknown, conditions, in an undeveloped state, persisting as fissures or cavities into post-embryonal life. Upon this basis, the process of syringomyelia became established, representing one type of the pathological condition. On the other hand, a second modus

of development was to be found in the proliferation of spinal interstitial tissue—in point of fact, tumor growth—as gliosis or gliomatosis, with secondary central decay and subsequent resorption. By this means, a cavity resulted in the newly-formed tissue. The abnormal condition of the spinal cord, often associated with spina bifida and other vertebral deformities, was looked upon as a more advanced stage of a similar process, as shown by cross-sections and original drawings. The paper is to appear complete in one of the medical journals.

Dr. Robert H. Babcock, of Chicago, presented a synopsis of his paper on—

The Schott Method of Treating Chronic Diseases of the Heart with Baths and Gymnastics.

After barely alluding to the history of the work done by Dr. Schott and his late brother in developing this novel application of balneology and gymnastics, he described the method, its effects, indications, and contra-indications, as follows:

The treatment consists of the administration of warm saline and carbonated baths; their temperature varies according to indications between 92° F. and 96° F.; duration from five to twenty minutes; as the patient's condition admits, the strength of the baths is increased, the temperature lowered, and the duration lengthened; the patient is told to maintain perfect quietude during the bath, and to rest for at least an hour afterwards, warmly covered.

The gymnastics consist of movements of the extremities and trunk, of extension, flexion, and rotation; during the performance of these exercises, a trained assistant applies counter-resistance, but so carefully as not to produce acceleration of pulse and respirations; these movements should be made slowly, steadily, and should be interrupted by short periods for rest.

The effects of both baths and gymnastics were declared due not to absorption, but to "imbibition," or penetration, by which the salts came in contact with the peripheral ends of the sensory nerves in the integument; a reflex influence was thereby sent to the heart. The exercises act through the motor nerves; as a consequence of these two agencies, the heart is made to contract more slowly and powerfully—to empty its cavities more completely—and, in short, to diminish in size; the pulse lessened in rate and improved in quality, strength, and volume; that the heart, enlarged through dilatation, grew actually smaller after a bath could

be, and was repeatedly proved by exact percussion; subjectively, the patient experienced amelioration of symptoms almost at once; the initial chilliness of the bath was speedily followed by a feeling of agreeable warmth and well-being.

The effect of the gymnastics on the heart was similar, but not quite so enduring; as was illustrated by a case of greatly dilated heart, which, after a gymnastic seance, was shown by percussion to have diminished an inch in breadth on each side.

This treatment was said to be suitable to all forms of chronic heart trouble except very pronounced arterio-sclerosis and aneurisms of the heart or great vessels; it is also most efficacious in neurotic hearts, as Graves' disease, and in other forms of weak or anæmic hearts.

Dr. Babcock next briefly described his observations on himself and four others: In all instances the observations corroborated the statements made as to the effects of the treatment. In his own case, his heart, which had been dilated from over-strain, was restored to a normal size in five weeks of treatment.

The paper was accompanied by a chart showing the effect and nature of the baths in the Doctor's own case. There were also sphygmographic tracings, and a record of the blood-pressure as indicated by a Bausch's sphygmomanometer.

In conclusion, the Doctor expressed his great faith in the treatment by declaring he intended to give this method of treatment to his own patients by means of artificial baths and gymnastics, and to that end is now having bath-rooms prepared.

There was no discussion of the paper excepting that Dr. J. C. Culbertson expressed thanks to the author and his appreciation of the value of his contribution, and his belief in the efficacy of balneology, which is far too little understood and employed by the body of the medical profession.

The Bacteria of the Surface.

Dr. Frank J. Thornbury (University of Buffalo) read a paper under this title, in which the latest researches were set forth, rational mechanical means of disinfection summarized, and the non-utility of antiseptics proclaimed. The varieties of organisms which the cutaneous and mucous surfaces present in great abundance comprise molds, yeast fungi, bacilli, cocci, color and odor-producing bacteria.

Inhabitants of every land and every region in every oc-

cupation have their characteristic germs nestling upon them. The hairy regions, as the axillary space, and the interdigital folds, are the places of predilection upon the cutis. Myriads of microbes are present in the oral cavity, the intestinal tract, the genital tract of the female, the male urethra, and in the conjunctival secretion and cerumen of the ear.

Among the masses are germs which are pathogenic, as the Fehleisen streptococcus of erysipelas. The cleansing of the surface constitutes one of the most important duties of asepsis. This pertains especially to the physician's own hands. It cannot be accomplished by the use of antiseptics, so-called, which do not even reach the bacteria imbedded in substrata of fat and dirt. The numbers of bacteria remain practically unaltered after the ordinary submersion of the hands in sublimate solution. The disinfection must be mechanical, dissolving away the glandular secretions, dead epidermal cells, vegetable and albuminous substances. For the latter purpose soap, hot water and brush are used, aided by alcohol and ether, and rubbing with sterile towels.

Baths are an important adjunct to asepsis, and one or a number should be administered previous to operation. The razor should be used freely for removing the hairs upon which germs aggregate, and the superficial epidermis, which is heavily impregnated with micro-organisms.

The lubrication of the hands may be of advantage in vaginal and in rectal examinations, and in the making of autopsies, to prevent dissemination of any remaining germs and avoid contamination. The mucous membranes are the most difficult of disinfection. The most powerful antiseptics are here worthless as in case of the skin. The irrigation of the vagina with a solution, 1 to 1000, has not the slightest influence upon the bacteriological condition. The use of these agents is hazardous. In case of the rectal mucous membrane, death may result from rapid absorption of the injected fluid. Irritation, catarrh, erosion, or some degree of intoxication, are common consequences. Irrigation with water, or some mild solution, the mechanical removal of the mucus and dirt by our fingers, aided by cotton or gauze pledgets, are the only means left at our disposal. It is easy to understand, therefore, that an absolute disinfection of the mucous membrane, such as we may insure upon the skin, is impossible. Preceding operations upon the intestinal tract, free purgation should be practiced; in case of the stomach, leavage. All the articles used in the disinfection should be sterilized—the gauze, cotton, and towels, in

steam; the brushes and nail-scrapers in boiling soda solution (1 per cent.). We must require a guarantee that the soap has been boiled in its manufacture; otherwise, it will contain many germs. The brushes, with their contained moisture and albuminous substances, are genuine culture habitats for microbes, and are dangerous articles. They require the most particular attention. They should be submerged continually in one-half per cent. sublimate solution in enamelled receptacles, besides being sterilized when heavily contaminated.

Dr. Wm. Thos. Corlett, of Cleveland, Ohio, read a paper on—

The Clinical Varieties and Treatment of Pemphigus.

His paper was illustrated by the description of unusual cases. The writer divided pemphigus into two main varieties, *pemphigus vulgaris* and *pemphigus foliaceus*, under which all cases, although differing in certain features, may be grouped. Under acute pemphigus, he gave the history of an epidemic of pemphigus in the new-born. The main features were that all the cases occurred in the practice of one midwife; the disease began at the end of the first week, as an erythema on the lower part of the face or upper part of the chest. This was followed by the formation of blebs, with flabby walls, which soon ruptured, leaving extensive raw surfaces. About three-fourths of the body was involved, and terminated fatally about the tenth day. The writer regarded it as due to contagion.

Under chronic pemphigus, which is the most common form, Dr. Corlett drew attention to the frequency with which the mucous membranes were involved, and cited a case in which the disease first appeared in the bronchial tubes simulating capillary bronchitis. Later, it appeared in the mouth and throat, which, from its resemblance to diphtheria, has been called pemphigus diphtheriticus. Finally, the disease attacked the eye-balls. On the skin, it differed in no way from the usual form. The case ended in recovery, but with the complete loss of sight.

In the treatment, he thought arsenic had been overestimated. Iron, strychnine and arsenic benefitted only as general tonics, which were especially indicated in this disease.

Locally, the continuous tepid bath was recommended, but, unfortunately, it is often impracticable, when recourse must be had to simpler measures. As soothing applica-

tions, the glycerole of tannin, one part to three or four of distilled hæmamelis, or water; or the glycerole of lead, one ounce to a pint of water, he thought the best at our command. The latter was preferred when but small areas were denuded of epidermis. When itching is present, a 3 per cent. solution of resorcin was recommended. Finally, when desquamation sets in, some emollient, such as the zinc ointment or carbolized vaseline, will afford the best relief.

Dr. B. Merrill Ricketts, of Cincinnati, exhibited photographs with the following synopses of

Some Surgical Cases.

Case 1.—Female, 23 years old, white, with sarcoma of right middle femur following injury one year previous. Amputation (Wyeth's) was resorted to with recovery.

Case 2.—Male, age 9, extrophy of bladder. Resorted to plastic operation followed by double herniotomy; recovery.

Case 3.—Dr. R., white, age 44, epithelioma right lower jaw, involving periosteum and medullary substance. Excision entire right lower jaw, sutures removed at end of fifty-five hours and discharged from private hospital at end of seventy-two hours. Union complete.

Case 4.—Male, 5½ years old, white. Tuberculosis head femur (right) two years' standing. Excision (12 min.) Head destroyed and surrounded by tuberculous matter. Recovery with an excellent result.

Case 5.—Female, aged 10 years, white. Tuberculosis head femur extra capsular. Free incision, evacuation of one quart of pus and spicule of shaft. Recovery without injury to joint.

Case 6.—Female, æt. 18, white. Tenderness over upper and inner surface of right tibia having existed for two years. Pain gradually became more severe. Iodide failed to relieve. He suspected tuberculosis, and made free incision, finding a thickened periosteum and a small tubercular deposit size of silver five cent piece, which was removed. Union of integument was primary, and the patient entirely relieved. This case fully demonstrates the importance of early exploratory incisions in suspected tuberculosis.

Case 7.—White female, age 55. Epihelioma over sternum 2½ inches in diameter. Extirpation, with portion of periosteum overlying sternum. Double pedunculated flaps each taken from mamma on either side, with primary union.

Dr. Geo. F. Keiper, of Lafayette, Ind., read a paper on—
Deafness—Its Causes and Prevention.

The doctor presents with his paper a table giving the reputed cause of 9,800 cases of deafness collated from the reports of asylums for the deaf. He endeavors to give concisely a summary of all views relative to the causation of congenital deafness as follows:

- (a) Cousins intermarrying.
- (b) Persons congenitally deaf intermarrying.
- (c) Relatives of deaf-mutes marrying.

This, however, is qualified by the statement: "If a proper examination of these cases had been made, the great probability is that the deafness would have been found in a great measure due to the very same causes we now proceed to consider," which are—

(1) *Predisposing*—(a) age—in four-fifth of the cases, deafness occurred before six years; (b) inflammation of the upper air-tract.

(2) *Exciting*—(a) scarlet fever, (b) cerebro-spinal meningitis, (c) measles, (d) mumps, (e) catarrh, (f) typhoid fever, (g) scrofula, (h) throat trouble caused nearly one-third of the number of cases.

A table is reproduced from Dr. Spencer's article (in the *Ref. Handbook of the Med. Sci.*), showing, out of 4102 cases, 2974 were caused by middle ear trouble; also a table from the Census of 1880, dealing with 9209 cases, of which 4551 were reputed to be due to scarlet fever and meningitis.

In closing the paper, a discussion of the prevention of deafness follows. The leading points are—

(a) Removal of all predisposing causes. It involves (a) catarrhal conditions, (b) young.

(b) The exciting causes are to be scientifically treated and particular attention given to the ears.

The address of Dr. Louis Bauer, of St. Louis, Mo., was on—

The Incurability of Advanced and Extreme Cases of Talipes—Equino-Varus by the Means and Methods in Vogue at the Present Time, and a Suggestion of a Way to Remove the Deformity without Disturbing the Usefulness of the Extremity.

In order to exemplify the points at issue, the doctor exhibited two plaster-of-Paris casts and the skeleton of a leg—all representing the characteristic peculiarities of advanced equino varus. Both cases were of congenital ori-

gin, and had been allowed to develop to their advanced state without any attempt having been made at reformation. The larger one referred to the clump-foot of an agricultural laborer just 27 years old when taken in charge. Dr. Bauer selected his case to test the efficacy of orthopædic surgery. The smaller cast had been derived from a little girl aged 12. Both had received unremitting attention—the one for three years, the other for more than two years. In either, all the resisting tendons and structures had been successively divided. Repeated attempts had been made, by main force, in order to effect a reduction, some of them under chloroform and with the aid of a fulcrum. They had been massaged, rubbed, and faradized. Mechanical appliances had been resorted to. Yet, no results were achieved proportionate to the efforts employed in either form or function of the feet. Worst of all, the movements of the latter remained tender in the man and irksome in the girl. Whether Dr. Phelps' procedure might have been more effective in either or both points, remains a question which the doctor hesitated to answer either way. Ever since, the relative failure of the orthopædic enterprise had not only remained a subject of disappointment with him, and prevented him from similar undertakings, but he had continued in his research to discover the causes of his defeat. The present of a valuable specimen from an esteemed professional friend had at last furnished the happy opportunity not only to solve the difficulty which had frustrated the restoration of form and mobility of those feet, but had pointed out a route by which both might be accomplished without inflicting too much pain, loss of time, or other troubles.

The specimen now before the Association invited the scrutiny of its members. Aside from the delicacy of *all the single bones*, attributable to both diminished innervation, and probably also to the fact that the specimen was that of a female, this precious legacy exhibited some remarkable displacements of the tarsal bones, thus furnishing the evidence of advanced talipes equino-varus.

The great shortening of the gastrocnemio-soleus muscles had brought about such rotation of the two large tarsal bones as to render their horizontal axis continuous to the axis of the leg, instead of being at right angle. The effect of this displacement could be readily demonstrated by the specimen:

(1) Astragalus and calcaneus vertical.

(2) The superior (articulating) convex surface of the former, presenting itself now at the front, has become flattened and uneven from non-use, and lost its cartilaginous covering.

(3) The articulation of the astragalus with the tibia is effected by a quadrangular plane at its posterior part, which, at best, could but sustain a very insignificant mobility, if at all.

(4) The papitutum astragali is turned downward, forming, together with the front part of the calcaneus, that prominence (tuberosity) upon which the patient stands and steps without any inconvenience soever.

(5) The consequence of this malposition of the two great tarsal bones is the complete derangement of the intertarsal joint (Chopart's).

(6) The scaphoid and multangular bones are disjoined and driven from their normal anatomical position in front to the inside of the astragalus and calcaneus, and this dislocation determines the adduction and supination of the anterior part of the foot.

The new inter-tarsal joint had acquired no firmness, and remained rather loose.

In order to permanently reform such an extreme case of clump-foot, it would be requisite to reduce the astragalus, and with it the calcaneus to their horizontal position. This alone would be an impossible task, because the lever is wanting to effect it. Besides, their articulating surfaces had to be reconstructed for motor work.

The same difficulty is met with in reducing to their proper places the scaphoid and multangular bones, to keep them in their respective places, re-establish their requisite forms, and reorganize the articulations.

Similar obstacles had to be contended with in all extreme cases of this kind, and the doctor had no doubt in his mind that the same causes had frustrated his assiduous work in those cases in which he had relatively failed.

Now, as to the question of the best method of relief. He had not the remotest intention of withholding the deserved appreciation from Dr. Phelps, of New York, of his merits in the advancement of orthopædic surgery, for they were many, important, and indisputable; besides, Dr. B. had no doubt that Dr. Phelps' operation had filled the existing hiatus of the past; but an impartial comparison would lead to the preference of a "*modified Chopart amputation*" of the front part of the foot.

(1) It dispenses with the tenotomy even of the Achilles tendon.

(2) It leaves the two large tarsal bones where they are found, and therefore does not interfere with the locomotive usefulness of the extremity.

(3) The length of the latter remains likewise undisturbed while the *exsection* of the astragalus in Phelps' operation necessarily shortens the limb.

(4) The operation is a comparative trifle, since it interferes with no important structure, opening only a *pseudo-articulation*.

(5) It makes but a small wound with ample covering of integument.

(6) The cicatrix is placed at the side of the stump, therefore not exposed to injury from pressure.

(7) The operation sacrificed only that portion of the foot having become a useless appendix and an eye-sore.

(8) In point of fact, the operation could not be called an act of mutilation, and the symmetry of form could be readily restored by artificial means.

In conclusion, Dr. B. remarked that he had occasionally seen cases of talipes-equino-valgus which might likewise be benefitted by a similar operation, since the astragalus occupied the same vertical position; whereas the scaphoid and multangular had become dislocated to the outside of the great tarsal bones with extreme *pronation* of foot.

Cutaneous Psorospermiosis

Was the title of a paper by Dr. A. Ravogli, of Cincinnati. Sporozoa of different kinds are living on the animal body, and belong to the class of protozoa, and are represented mostly by psorospermæ and gregarinidæ. Psorosperms are parasites of the cells cytozoa. Leuckart pointed out one kind which he called *coccidium oviforme*, which he found infiltrating the liver of the rabbit in disease of this organ. Wickham and Darier called the attention of dermatologists to the existence of this peculiar parasite on the human skin in the so-called Paget's disease, in the psorospermose folliculaire vegetante, and in some kind of epithelioma. Their observations were discussed, and many denied the parasitic nature of those corpuseles, and still several maintain them to be nothing else than cells in a colloid degeneration. Several cases of a remarkable appearance occurred in form of ulcers, of papules, of pustules, of new growths, where psorosperms were found, which are referred

to in extenso. In all the cases the objective symptoms are the same, either pustule or papule or ulcer. The color is brownish red, resembling that of syphilitic eruptions. All these lesions show depressions in their centre and a kind of whitish points embedded in the tissues. The epidermis gets hard and the sebaceous glands are full with hard sebum and dry epidermic cells. Secretion is usually scanty, and the crusts which cover the pustules are small and dry, the hairs are atrophied and alopecia is produced. At times a dermatitis is developed, and then the patients complain of heavy burning sensations. Ordinarily a peculiar itching sensation accompanies these eruptions. When the lesions recover a scar remains—a scar which has something peculiar not unlike a little diamond. The eruptions are very stubborn, and on the recovery of the old lesions new ones come out. Cases are referred to of psorospermiosis (keratosis) follicularis vegetans in papulo-pustular and ulcerative form. In several of these cases eczema seborrhosium (Unnæ), lupus erythematosus and epithelioma were present. In all these cases the surface was thoroughly scraped with the curette. The detritus removed with the curette was carefully washed, treated with a mild solution of ammonia, stained with methyl-blue and methyl-violet, and in all constantly large cells were found, which are identical with those found by Darier, and resembling exactly coccidium oviforme (Leukart). These cells were very large, oval-shaped, sometimes without nuclei and sometimes having large numbers of nuclei, having high chromatophoric power, and are deeply stained. They are contained in a thick membrane, which remains white, and at times a kind of turbid liquid comes out of these cells. They have locomotive power and enjoy amœboid movements. Sometimes around one of these large cells small cells are found, which prove to be younger cells of the same nature.

We are inclined to consider these cells of a parasitic nature from the fact of their power of locomotion and of amœboid movements—changing shape, showing reproduction. When we find these strange bodies and diseased surface, we are not far from the possibility that these are the cause of the disease. And when the same peculiar features are found in several morbid forms, we have right to consider them as produced by the same cause. Having, therefore, found these coccidia in keratosis follicularis in its different forms, in eczema seborrhosicum (Unnæ), in lupus erythematosus, and in certain kind of epitheliomata, we have to

consider those diseases under the same group of psorospermoses. The cause is the same; the difference is in the anatomical arrangement of the dermal tissues, which are affected. In all these diseases the peculiar depressions are present, the itching sensation, the tendency to accompanying dermatitis, the peculiar dryness of the epidermis, the tendency to the development of epidermic cells, the scars following the recovery of the lesions, the easy production of an hypertrophic form resembling epithelioma. We have examined some cases of true epithelioma, two of them relapsing, and we never found coccidia like we have found in epithelium, accompanying lupus erythematosus, where coccidia were abundantly found.

As to the treatment, although all these diseases are exceedingly stubborn, ichthyol in different formulæ has given the best results.

Conclusion.—If we find a number of morbid forms having in common the cause, some characteristic lesions, and that they are all benefited by the same remedy, we will not go far from the truth in asserting that they are to be comprehended in the same morbid group.

Book Notices.

Leonard's Physician's Pocket Day-Book. Bound in Red Morocco. with Flap, Pocket and Pencil Loop. Price, Post-paid, \$1 00. Published Annually by the Illustrated Medical Journal Co., Detroit, Mich.

This popular day-book is now in its sixteenth year of publication. It is good for *thirteen* months from the first of *any* month, and accommodates charges for fifty patients daily for that time, besides having cash department, complete obstetric records, space for diagnosis of each case, or brief records of treatment, following each name-place. Name of each patient needs to be written but three times in a month. It has the usual *printed matter*, such as: Dose List; Poisons and Antidotes; Urinary Tests; Exanthematicæ; Disinfectants; Weights and Measures. The book is $7\frac{1}{2}$ inches long and $3\frac{1}{2}$ inches wide, so that it will carry bill-heads or currency bills without folding. It is bound in flexible covers, and weighs but five ounces, and is easily carried in the pocket.

Annual of the Universal Medical Sciences. (Issue of 1893.) Edited by CHARLES E. SAJOUS, M. D., and SEVENTY ASSOCIATE EDITORS. Assisted by over Two Hundred Corresponding Editors, Collaborators and Correspondents. Illustrated with Chromo Lithographs, Engravings and Maps. 1893. F. A. Davis Company, Publishers. Philadelphia, New York, Chicago and London. In Five Octavo Volumes. About 500 pages each. Sold only by Subscription. \$15.

This 1893 issue of "yearly report of the progress of the general sanitary sciences throughout the world" is in keeping with its predecessors in thoroughness. Each department of medicine, surgery, obstetrics, anatomy, physiology, etc., has been handled with a masterly hand, and the result is the bringing together of, apparently, all advances that have been made in the respective departments. Indeed, it would seem that this work is indispensable to the practitioner—whether special or general—who feels the earnest responsibility of his calling in dealing with human health and life; for it supplements the best of text-books of the most recent date, and tells him of things of value that have been discovered or devised during the year. It is a moderate annual amount to expend \$15 for such a store-house of information—systematically arranged with excellent indexes, which enable the owner to readily refer to any subject about which advance has been made—especially when that expense also entitles the subscriber to the *Universal Medical Monthly*. A work like this cannot be reviewed. We can only commend it to every medical man as containing the latest and the best of valuable information.

International Clinics. Vol. III, Third Series, 1893. Edited by JNO. M. KEATING, M. D., LL. D., Colorado Springs, Col.; JUDSON DALLAND, M. D., Philadelphia; J. MITCHELL BRUCE, M. D., F. R. C. P., London, England; and DAVID W. FINLAY, M. D., F. R. C. P. Philadelphia: J. B. Lippincott Co. 1893. Cloth. 8vo. Pp. 365—xii. Price, \$2.75. Leather, \$3. (Sold only by subscription.)

We always look forward with great interest to the coming of this "Quarterly of Clinical Lectures on Medicine, Neurology, Pediatrics, Surgery, Genito-Urinary Surgery, Gynecology, Ophthalmology, Laryngology, Otology, and Dermatology, by Professors and Lecturers in the Leading Medical Colleges of the United States, Great Britain, and Canada;" for we are sure to find in the issues clinical lectures by eminent authorities that are of the greatest service to practitioners. In this volume, for instance, is a lecture by Prof.

Jas. M. Anders, of the Medico-Chirurgical College of Philadelphia, on "three cases of bronzing of the skin—one due to pediculosis corporis; one to pulmonary tuberculosis, and one to syphilis, old age, and pulmonary phthisis"—which lecture is a good reminder, and a great help in diagnosing each of these three forms of bronzing from that which occurs in that peculiarly grave trouble, Addison's disease. In brief, in each of the departments named above, there is something of service to the physician, surgeon or obstetrician. There are 48 distinct clinical lectures on as many—in fact, on more—subjects as they arise in daily practice. So that the four volumes of a year give about 200 lectures on different subjects, and all are furnished in cloth at \$11 a year. The investment is small for works of such exceeding practical value.

System of Diseases of the Ear, Nose, and Throat. Volume II.

Edited by CHARLES H. BURNETT, A. M., M. D., Emeritus Professor of Otology in the Philadelphia Polyclinic; Clinical Professor of Otology in the Woman's Medical College of Pennsylvania, etc Philadelphia: J. B. Lippincott Co. 1893.

As a whole, Dr. Burnett's two volumes on *Diseases of the Ear, Nose, and Throat*, are excellent. Naturally, they commend themselves rather to specialists than to general practitioners, who are coming daily more and more to recognize that there are limitations to their domain in medicine. Naturally, again, it is not to be expected that two volumes of about 800 pages each can present so broad a subject as the upper mucous cavities without making important omissions. It would have been well had the chapter on the anatomy and physiology of the nose been omitted from this system where, owing to necessary limitations, justice could not be done them. The important possible variations, for instance, in the size and shape of the accessory sinuses of the nose receive scarcely a mention. A chapter on the embryology of the nose would have been acceptable. The second volume contains several articles worthy of special mention among them, that by Dr. John O. Roe, of Rochester, N. Y., on Foreign Bodies in the Larynx and Trachea; that by Dr. Joseph A. White, of Richmond, Va., on Neuroses of the Nose and Naso-Pharynx, and that by Lennox Browne, of London, on Deformities and Morbid Growths of the Pharynx and Larynx, all of which show extensive research, and that their authors appreciated the scope of articles in-

tended for a system of departmental medicine. The references given to three articles as foot-notes are numerous and valuable. Dr. S. H. Chapman has an interesting article on Vocal Culture and Hygiene; as also has Dr. Geo. M. Gould on "Diseases of the Eye Dependent Upon Diseases of the Nose." The chapter on Morbid Growths and Deformities of the Nasal Cavities is too much condensed to be of more than general interest. It treats of important subjects, and should have been given more space. The many excellent articles, however, contained in the two volumes make them of more than ordinary value, and well worthy of a place in every medical library.

Text-Book of Ophthalmology. By WM. F. NORRIS, A. M., M. D., Professor of Ophthalmology in the University of Pennsylvania, and CHARLES A. OLIVER, A. M., M. D., one of the Surgeons to Wills Eye Hospital. Philadelphia: Lea Brothers & Co. 1893

Few text-books are deserving of more praise for the presentation of their subject than this work by Drs. Norris and Oliver. The beauty and excellence of its illustrations, and the judgment with which they have been selected, make this work in these respects, so far as we know, without equal among the text books of ophthalmology. Part I is written by Dr. Oliver, whose introduction is a chapter on embryology, giving many important details usually omitted in text-books on the eye. Following are excellent chapters on the gross and minute anatomy and physiology of the eye. Dr. Oliver then takes up theoretical and practical optics, which are carefully and exhaustively considered. Emmetropia, hypermetropia, myopia, and astigmatism, as conditions, and accommodation, together with the diseases of the eye and their treatment, have been selected by Dr. Norris as his field in preparing the second part of this volume. This part of the work has, again, been most carefully done, so that the two parts together give us, as a whole, the best text book on ophthalmology we have seen, and we cordially recommend it. We are glad to see that the magnificent work for which ophthalmology is indebted to the courage and clear mind of Dr. Geo. T. Stevens, the work that has given to us exophoria, esophoria, and hyperphoria, together with their meaning and relation to eye-strain, with its possible results, is beginning to obtain some of the recognition it deserves. Drs. Oliver and Norris have given us the most comprehensive text-book consideration of the outcome of Dr. Stevens'

work that has as yet appeared. The subject, however, merits far more consideration than it, even in this excellent work, receives.

Practical Treatise on Diseases of the Skin, for the Use of Students and Practitioners. Third Edition. Thoroughly Revised and Enlarged. By JAMES NEVINS HYDE, A. M., M. D., Professor of Skin and Venereal Diseases, Rush Medical College, Chicago, etc. Philadelphia: Lea Brothers & Co. 1893. 8vo. Pp. 802. Cloth, \$5 00; Leather, \$6 00.

As compared with the second edition (1888), the present edition contains 126 more pages of text, and has nine plates (three of which are colored) and 108 engravings. Besides the addition of new material, every page has been so thoroughly revised as to make this third edition an altogether new book, thoroughly abreast with advances in dermatology and full of useful diagnostic and therapeutic instruction for the general practitioner. The exanthemata, as usually considered in works on "Practice of Medicine," and some other acute infectious diseases, such as erysipelas, etc., are treated in this work in a most excellent practical manner. In short, the book is most unreservedly commended as useful to medical students and practitioners—with descriptions true to nature, which cannot fail to impress lessons of every-day use.

Practical Treatise on Materia Medica and Therapeutics. By ROBERTS BARTHOLOW, M. A., M. D., LL. D., Professor of Materia Medica, General Therapeutics, and Hygiene, in Jefferson Medical College of Philadelphia, etc. *Eighth Edition, Revised and Enlarged.* New York: D. Appleton & Co. 1893. Cloth. 8vo. Pp. 820—xxvii. Price, \$5. (For sale by West, Johnston & Co., Richmond.)

This is the most popular of treatises on therapeutics. In issuing now the eighth edition, the opportunity has been taken advantage of to introduce many new agents found useful in practice—whether proprietary or not—and to conform the formulæ to the recently revised edition of the U. S. Pharmacopœia. We are therefore surprised that the most generally used agent of the analgesic class—antikamnia—receives no attention. Preparations also of phytolacca are developing a good reputation in the treatment of obesity, and yet we find no allusion to this property of poke. Several such omissions attracted our attention, the more because the author, in his Preface, says that, as a member of the Committee on Revision of the U. S. Pharmacopœia, he coincided in the propriety of omitting them from official recognition, whereas as the author of a treatise for practitioners, etc., he admits many of the remedies in question.

However, Dr. Bartholow's work gives a most excellent grouping of virtues ascribed to different drugs, and, hence, will long remain the companion-book of the practitioner who seeks results. Indeed, it is an almost invaluable work to the practitioner.

Medical News Visiting List, 1894. Philadelphia: Lea Brothers & Company.

This "Visiting List" has gained such popularity that it is only necessary to announce that the edition for 1894 is ready. It is published annually in four styles—weekly, dated for 30 patients; monthly, undated for 120; perpetual, undated for 30 and for 60 patients a week a year. The first three styles contain 32 pages of text and 176 of blanks. The 60-patient style consists of 256 pages of blanks. Each style is wallet-size, and has flexible leather cover, pocket, pencil, etc. Price in any style, \$1.25; or 75 cents to subscriber of either *American Journal of Medical Sciences* or *Medical News*. Thumb letter index, 25 cents extra.

Report of the Surgeon-General of the Army for the Fiscal Year Ending June 30th, 1893. By GEO. M. STERNBERG, Surgeon-General. Washington, D. C. Pamphlet 8vo. Pp. 231.

As usual, this Annual Report contains useful statistical information and other valuable matter. Experiments with rifle projectiles are detailed, and results show that it is the hardness of the bullet rather than its shape that gives it the greater penetrating effect.

Editorial.

Medical Bills in Virginia Legislature.

It does not seem to us to need argument to induce the profession of Virginia to give their willing help to the several bills we have seen, prepared for the welfare of the public health and the advancement of professional interests. In the Message of Gov. McKinney to the General Assembly of Virginia, 1893-94, proper importance is given to the requirements of the Virginia State Board of Health in order to make it effective. The bill prepared for the treatment of the worthy curable sick of the State in the Virginia Hospital likewise commends itself to the approval of the good citizens of the State. The changes proposed in the law relating to the Virginia State Board of Health, etc., have been

thoroughly considered by the Board after years of observation and study as to how to perfect the organization. State Retreats for the incurable sick of the State should also be provided. These are among the most prominent bills looking to the good of the citizens and profession, which the doctors of Virginia should urge upon the favorable consideration of their respective legislators.

Proposed Change in Law Relating to Medical Examining Board of Virginia.

We call the attention of the medical fraternity to the fact that the Legislature is now in session, and it behooves them to use their best endeavors to see that their representatives lend their aid to the Examining Board in securing what necessary legislation it asks for in the line of perfecting the law under which it now exists.

The changes asked for are but few, the most notable being that of the reduction of the membership of the Board. As it now exists, it has been found entirely too cumbersome, and unanimously its members agree that its efficiency would be promoted by a large reduction of its number. The number generally agreed upon, we think, is ten—one from each Congressional District and two homœopaths. Of these ten, the President and Secretary would take no active part in examining, but a separate branch would be assigned each of the other eight.

The law has recently been entirely revised by Mr. Robt. Barton, and such flaws as that by which a noted quack escaped have been eliminated. In the shape in which it is proposed to amend it, Mr. Barton thinks it will stand the tests of the courts in every respect. It is, in fact, largely taken from the West Virginia law, which has already stood the test of its highest court, as well as that of the U. S. Supreme Court.

We trust that the Committee appointed by the Medical Society of Virginia, 1892, to co-operate with a Committee from the Board, will come forward at once and do their utmost to aid us in securing the desired legislation. We cannot tell what opposition we may encounter, and, therefore, must be on the alert to stem it, from whatever source it may come.

Let every physician in the State, who is interested in medical advancement, see to it that his legislator supports us in our efforts, and thus we will be enabled, not only to hold the high standard our Board now has, but will raise it to a still higher standard.

Virginia Pharmacal Company, Richmond, Va.

This Company is fortunate in having such officers. The Chemist and Superintendent is Andrew T. Snellings, Ph. G., Professor of Materia Medica and Botany in the College of Physicians and Surgeons, Richmond, Va. Captain Samuel Regester, the General Manager, has a good name in wholesale drug circles. Mr. Jno. T. Watson, Jr., recently of Danville, Va., was an admirable acquisition, not only as Treasurer, but as one familiar, by years of experience, with all the details of pharmacy. The President of the Company, Col. John B. Purcell, is of the well-known and most excellent house of Purcell, Ladd & Co. Mr. R. W. Powers, the Vice-President, is senior member of the firm of Powers-Taylor Drug Co. And the Secretary is Mr. G. G. Minor, of the Owens & Minor Drug Co. The Company recently increased its paid-in capital, and largely added to its manufacturing facilities; so that it puts upon the market a full line of pharmaceutical products—always accurately made from the best lots of well-selected drugs.

The Samuel D. Gross Prize, \$1,000.

The Quinquennial Prize of One Thousand Dollars under the will of the late Samuel D. Gross, M. D., will be awarded January 1, 1895. The conditions annexed by the testator are that the prize "Shall be awarded every five years to the writer of the best original essay, not exceeding one hundred and fifty printed pages, octavo in length, illustrative of some subject in Surgical Pathology or Surgical Practice, founded upon original investigations, the candidates for the prize to be American citizens." It is expressly stipulated that the successful competitor, who receives the prize, shall publish his essay in book form, and that he shall deposit one copy of the work in the Samuel D. Gross Library of the Philadelphia Academy of Surgery. The essays, which must be written by a single author in the English language, should be sent to Dr. J. Ewing Mears, 1429 Walnut St., Philadelphia, before January 1st, 1895. Each essay must be distinguished by a motto, and accompanied by a sealed envelope bearing the same motto, and containing the name and address of the writer. No envelope will be opened except that which accompanies the successful essay. The Committee will return the unsuccessful essays if reclaimed by their respective writers, or their agents, within one year.

The Committee reserves the right to make no award if the essays submitted are not considered worthy of the prize.

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Original Communications.

ART. I—An Aseptic Operation—Its Organization and Details of Preparation.

By STUART McGUIRE, M. D., of Richmond, Va.,

SURGEON TO ST. LUKE'S HOME AND THE VIRGINIA HOSPITAL.

The busy surgeon has little time to devote to the preparations for an operation, and the details of the work are usually entrusted to assistants; hence there is need for a brief, but complete, manual for their guidance. No such work has yet been published, and it is therefore hoped that the following pages, which are abstracts from lectures delivered in St. Luke's Training School for Nurses, will prove useful.

No claim is made for originality, nor are the subjects discussed exhaustively, but the details of the methods which practical experience in St. Luke's Home have proved the most satisfactory, are given fully.

PREPARATION OF THE PATIENT.—The patient should be under observation for some days before the operation, and, if possible, confined to bed for the last day or two, thus allowing the various organs to accustom themselves to the new conditions in which they will be placed. The function

of the skin, kidneys and bowels should be stimulated, if sluggish from improper habits of living, the heart carefully examined to determine the safety of the anæsthetic, and the urine analyzed to ascertain the condition of the organs which excrete it. A warm plunge bath should be given daily, and also an antiseptic vaginal douche, if the patient be a woman. The diet should be simple and nutritious, and of a character to leave little residual matter in the intestines. The bowels should be evacuated daily, and a purgative given the night before the operation, followed by a simple enema the next morning. A large dose of quinine should also be given, as clinical experience has shown that its influence lessens surgical shock.

The morning of the operation a general bath should be given with warm water and soap, and the part to be operated upon cleanly shaved. The area should then be well-scrubbed with hot water and green soap, washed with alcohol, then with a 1:1000 solution of bichloride of mercury, and finally a dressing of bichloride gauze applied, and retained in place by a bandage or binder. The patient should be dressed in a fresh suit of merino under-clothing, woollen socks or stockings, a night-gown, and a warm wrapper.

No food should be given for some hours before taking the anæsthetic, and immediately before the operation the bladder should be emptied.

PREPARATION OF OPERATING-ROOM.—Nothing need be said under this head with reference to hospital work, as all connected with these institutions are thoroughly familiar with the details.

Nearly all large hospitals have an operating-room specially arranged for surgical work, and patients are taken to this room, operated upon, and then carried back to their beds in the private rooms or wards of the buildings. In operating in a private house, however, it will be found easier to operate in the room in which the patient is to be placed during convalescence, as it entails less inconvenience in the household, and lessens the work of preparation.

The room selected should be moderately large, well-lighted, and easily ventilated and heated. The carpet should be taken up, and the curtains, pictures and unnecessary furniture removed.

The walls should be brushed down, and the floor, frames of the doors and windows, and wood-work of the furniture washed with 1:1000 solution of bichloride of mercury.

The furniture should consist only of a bed, two chairs, an operating table, and four small tables.

The bed should be a single one, preferably of iron, and should have a good spring and a firm hair mattress. It should be placed so as to be readily accessible from both sides and the foot.

The chairs should be stiff ones, not rockers, and of wood, so that they can be washed without injury.

The operating table should be firm and of a suitable size and shape. A pine table, such as is commonly found in the kitchen, or two small tables placed end to end, will answer. The operating table should be placed opposite the window which admits the best light, and the lower panes of the window screened by tacking a piece of muslin or a towel across them. On the table should be placed a folded blanket and a pillow, and over these a rubber protective and a sterilized sheet.

The four small tables should be covered with sterilized sheets or towels. One should be placed at some distance from the operating table, and contain the basins and solution used in sterilizing the hands; one to the right of the first assistant for the sponge basins; one to the right of the operator for the instruments and dressings, and one behind the operator for the basin of pure water in which to wash his hands during the operation.

ARRANGEMENTS OF THE PATIENT.—It is important to prevent the patient being chilled during an operation, as it increases shock and retards reaction. Care should be taken to keep the temperature of the room uniform, to avoid draughts, to make no unnecessary exposure of the body, and to prevent wetting.

If the site of the operation permits, the patient's limbs should be closely wrapped in a blanket, and the chest protected by a folded piece of flannel. Hot water bags may be placed at the patient's feet. The limbs should be secured by passing a bandage over them just above the knees and tying tightly under the table. The arms should be confined to the sides by twisting one end of a sterilized towel around the hand and wrist and thrusting the other end under the patient's hip. Rubber pads or sheets should be adjusted so as to prevent the various solutions employed from saturating the patient's clothing and bedding. The protective dressing should be then removed from the seat of operation, and the surface again washed successively with alcohol, 1:1000 solution of bichloride of mercury and sterilized water. The part should be covered with a large piece of aseptic gauze having a slit cut in it large enough through which to work.

PREPARATION OF OPERATOR AND ASSISTANTS.—Before beginning a serious operation, the operator and his assistants should take a full bath, and put on an entirely fresh suit of clothing. Their heads should be protected by linen caps, and their bodies by linen gowns or sheet aprons. Their arms should be bare to the elbow and their hands carefully sterilized.

DUTIES OF ASSISTANTS.—As delays in an operation are not only annoying to the surgeon, but dangerous to the patient, it is important for assistants to be well drilled, and to know exactly what they are expected to do.

The number of assistants and their duties varies with different operators, and with the same operator under different circumstances. The following is a convenient division of the work:

The Anæsthetizer stands at the head of the table. His duty consists solely in the administration of the anæsthetic, which requires his undivided attention.

The First Assistant stands on the left side of the table opposite the surgeon. He sponges the wound, catches bleeding vessels, and assists the operator in every way possible. He should endeavor to anticipate the needs of the surgeon,

and direct the other assistants in their work, thus saving the operator time and trouble.

The Instrument Assistant stands to the right of the surgeon at the side of the table which contains the instruments and dressings. He hands instruments to the operator, supplies the first assistant with ligatures, and threads needles with the required material, as they are needed. As soon as an instrument has been used, he washes it in sterilized water, and returns it to its place in the trays.

He should keep an accurate list of the instruments in solution, to be certain that none are lost. It is also his duty to cut the dressings in the desired shape, and if their application devolves on the first assistant, to assist him, taking the place at the side of the operating table vacated by the surgeon.

The Sponge Nurse stands behind and to the right of the first assistant, at the side of the table on which are placed the basins for the sponges. The basins should be two in number, one containing cold, and the other warm sterilized water. The first assistant, after using a sponge, throws it into the basin of cold water; the nurse frees it thoroughly from blood, and places it in the basin of warm water, from which she takes it, squeezes it dry, and hands it to the first assistant when needed.

Sponges should be washed first in cold water, because it does not coagulate the fibrin of the blood, and thus prevent its removal. They should then be placed in warm water to elevate their temperature, and to prevent their chilling the tissues to which they are applied, and lowering their vitality.

The nurse should make a written record of the number of sponges in her charge; and if this number is increased during the operation, either by the addition of new sponges or by the division of one already in use, the record should be corrected. At the close of the operation, she should count the sponges aloud, thus assuring the surgeon that none have been left in the wound or abdominal cavity.

Extra Assistant.—The assistants just named are not al-

lowed to touch anything which has not been sterilized—hence it is necessary to have an extra assistant to alter the position of the patient on the table, to assist the anæsthetizer if the patient vomits, to empty and refill basins, to open and close windows and doors, and to do the many little things which, if done by one of the other assistants, would necessitate the re-sterilization of their hands and thus delay the operation.

AFTER-CARE OF THE PATIENT.—Unless complications occur, the management of a patient after an operation is simple. After the patient is put in bed, a nurse should remain at the bedside until the effects of the anæsthetic wear off. If there is much shock, it should be combatted by appropriate remedies. Nausea is usually a troublesome symptom, but should be treated tentatively. Anything in the stomach aggravates the trouble, and hence little or no water should be given. A cloth wrung out of ice-cold water placed on the forehead, or a mustard plaster on the abdomen, does good. The dressings should be frequently examined to see if there is any indication of secondary hæmorrhage. Food at first should be given sparingly. It should be of a liquid form, concentrated, nutritious, and easily digested. The bowels should be moved on the second day. Unless drainage has been used, the dressings should not be disturbed for a week or ten days. The three indications for changing the dressings at an earlier date are: Pain, fever, and saturation of the dressings with secretion from the wound. In dressing a wound, the same care should be exercised to prevent its infection as was originally observed at the time of the operation.

PREPARATION OF WATER.—An abundance of both hot and cold water for irrigating the wound and cleansing the hands, instruments, and sponges, is essential in an operation. Water should be free from both inorganic and organic matter, as the presence of inorganic matter acts as a mechanical irritant, and the existence of organic matter vitiates asepsis by the introduction of bacteria. The inorganic, or mineral constituents, can be removed by either

distillation or filtration, and the organic, or bacterial element, by boiling. The method of purifying water, therefore, embraces two processes—

1st. The water should be filtered or distilled.

2d. It should be boiled in a clean vessel for at least ten minutes.

A portion of the water should be allowed to cool, so that during the operation the temperature of the hot water can be lowered by adding cold water to it. Nurses sometimes cool water by putting in a lump of ice, under the mistaken impression that the freezing process has destroyed all germ-life, and that hence the water resulting from the melting ice is sterile. It is as important for the cold water to have been boiled as it is for the hot, and hot sterilized water should never be cooled by the addition of cold water which has not been so treated. If sufficient time is not available to allow the water to cool, the process may be hastened by surrounding the receptacle with ice, but the ice should not come in actual contact with the water.

PREPARATION OF SOLUTIONS—Solutions are used as disinfectants and to irrigate and clean wounds and cavities. The following are the methods of preparing those most commonly in use.

Pure Water is prepared by filtering or distilling water, then boiling for ten minutes, and allowing it to cool to the desired temperature.

Normal Salt Solution is prepared by adding a drachm and a half of chloride of sodium, sterilized by heat, to two pints of pure water, filtering through filter-paper, boiling, and allowing it to cool.

Thiersch's Solution is prepared by dissolving two parts of salicylic acid and twelve parts boracic acid in one thousand parts of water, filtering, boiling, and allowing it to cool.

Bichloride Solution is prepared by dissolving in a given quantity of distilled water the number of tablets of bichloride of mercury that are specified on the bottle by the manufacturer to make the requisite strength.

Carbolic Solution is prepared by adding carbolic acid to water. The strength usually used is 3 per cent., and the solution can approximately be made by adding four drachms of carbolic acid to one pint of sterilized water.

HANDS.—The hands of the operator and assistants are the most frequent source of wound infection—hence, great care should be taken in their sterilization.

In sterilizing the hands, the arms should be bare to the elbow, the skin free from abrasions, the finger-nails closely trimmed and well cleaned, and rings, if worn, removed.

The following is an effective process:

1st. Wash the hands with warm water and green soap, to remove dirt. A nail-brush should be vigorously used, to render the process thorough, and special attention devoted to the finger-nails and tissues around them.

2d. Rinse all trace of soap from the hands, and immerse them in absolute alcohol for one minute.

3d. Soak them for the same length of time in a warm 1:1000 solution of bichloride of mercury.

4th. Finally, wash them in one or two sterilized waters, to remove the bichloride, and dry them on an aseptic towel.

It is as important for the hands of an assistant, who handles sponges, instruments, or dressings, to be as clean as the operator's, and they should receive the same careful attention. If, during the course of an operation, the surgeon, or an assistant, touches any object which is not aseptic, his hands should be scrubbed and disinfected anew.

INSTRUMENTS.—Instruments should be simple in construction, and readily taken apart, to facilitate cleaning. The instruments selected for an operation should be cleaned by washing with green soap and warm water, a nail-brush being used on the locks and serrated parts, such as the jaws of artery forceps. The blades of the knives should then be wrapped in cotton to prevent their being dulled, and the needles stuck in a piece of gauze to keep them from being lost, and the instruments wrapped in a towel. The bundle should be tied with a bandage, or fastened with safety pins,

and disinfected by being placed in the sterilizer and steamed for forty minutes. After the administration of the anæsthetic has been commenced, the package should be opened, and the instruments slid into trays containing sterilized water.

An equally effective, though more troublesome plan is to place the instruments in a 1 per cent. solution of carbonate of soda, and boil for ten minutes. The soda is a germicide and also prevents rusting.

In minor operations, it is frequently thought sufficient to place the instruments in a tray containing a 5 per cent. solution of carbolic acid for fifteen minutes and then pour off the solution and refill the tray with sterilized water.

If an instrument is dropped on the floor during an operation, it should not be used until disinfected again.

When an operation is over, the instruments should be well washed, carefully dried, and returned to their cases.

SPONGES.—During the first craze for asepsis, sponges were almost abandoned, and pledgets of cotton or wads of gauze used in their place. These artificial substitutes proved unsatisfactory, and as it was found that with care sponges could be rendered perfectly sterile, they again returned to favor. Some surgeons even now throw a sponge away after using it in one case, doubting the power of germicides to destroy the micro-organisms with which it may have become infected, but it is illogical to suppose that if the sponge, which was once filled with decomposing matter, can ever be rendered aseptic, that the process cannot be repeated. Sponges can be used and resterilized many times with perfect safety, the only limit being the resistance of their tissue to the action of the solutions used. When a sponge becomes soft and friable from the effect of an antiseptic or bleaching fluid, it should be destroyed.

If sponges could be boiled, then sterilization would be much simplified, but very hot water causes them to shrink, to lose their elasticity, and to become darker in color; hence, they should never be put in a solution warmer than can be

comfortably borne by the hand. The following is one of the best methods to sterilize new sponges:

1st. Put the sponges in a bag and beat them well to remove sand.

2d. Wash them several times with warm water and green soap to remove dirt, and adulterants sometimes put in by dealers to render them more saleable.

3d. Soak them for twenty-four hours in a 2 per cent. solution of hydrochloric acid to dissolve calcareous matter.

4th. Wash them in plain water until the acid is removed, which can be determined by testing with blue litmus paper.

5th. Put them in a saturated solution of permanganate of potassium, and allow them to remain until stained a mahogany brown. Then rinse in sterilized water. It must be remembered that the strength of the solution deteriorates after a number of sponges have been through it, and that fresh permanganate has to be added from time to time to keep it up to the standard. When this is done the sponges should be taken out of the liquid, the permanganate dissolved, and the sponges put back, for if the drug is put in on the sponges it discolors them in spots.

6th. After the sponges have been freed from an excess of permanganate they should be placed in a saturated solution of oxalic acid until bleached. Care should be taken to remove them as soon as they are white, as a prolonged bath in the bleaching fluid softens their fibres. Additions of oxalic acid have to be made to the solution at intervals to keep it up to its standard.

7th. Put them in a 1:1000 solution of bichloride of mercury for one hour.

8th. Finally wash them in repeated baths of sterilized water to remove all trace of the chemicals previously employed.

It is almost as easy to prepare several hundred sponges as it is to prepare a dozen, and in hospitals it is customary to sterilize a large number at one time. When this is done, and the process just described is completed, the sponges are

placed in large glass-covered jars which are filled with a 3 per cent. aqueous solution of carbolic acid, to which a small proportion of glycerine is added to prevent the sponges from becoming blackened. Before each operation the required number of sponges are removed from the solution by a pair of aseptic forceps, and washed in sterilized water to remove the carbolic acid.

After sponges are used in an operation they should be well washed in cold water to free them from blood, dried, and put into a bag. When they accumulate in sufficient numbers they are again sterilized.

To sterilize sponges which have been used they should be soaked in a saturated solution of baking soda for twelve hours to remove all animal matter, rinsed in plain water to remove the alkali, and then put in the solution of permanganate of potassium and afterwards treated by the method just described.

BASINS, ETC.—Irrigators, pitchers, basins and trays used in the operating-room should be scrupulously clean. They should be made of some material which is not effected by solutions of corrosive sublimate, such as glass, rubber, porcelain or agateware.

Prior to the operation they should be washed with water and green soap, rinsed, and filled with a 1:1000 solution of bichloride of mercury. Before using, the solution should be poured out and the utensils washed in sterilized water.

OPERATING-ROOM LINEN.—The linen which requires sterilization for an operation consists of sheets, pillow-cases, towels and operating gowns. They should be placed in the sterilizer and subjected to high temperature for forty minutes before the operation, and removed as needed by an assistant whose hands have been rendered sterile. After the operation they should be soaked in a cold solution of baking soda to remove the blood, immersed for one hour in a 1:1000 solution of bichloride of mercury, washed in plain water, and sent to the laundry.

LIGATURES AND SUTURES.—Ligatures are made from a

variety of materials, and sterilized by many different processes. The following are methods of preparing silk, cat-gut and silk-worm gut:

Silk.—In hospitals silk is usually kept in a glass ligature box, which has several spools for the different sizes. The silk, when it comes from the dealer, is wound on the glass spools, and the spools containing the silk boiled in water for five minutes and returned to their places in the box. The ligature box is then filled with equal parts of alcohol and water, to which is added enough carbolic acid to make a 5 per cent. solution. Three days before an operation the hands should be sterilized, and the required quantity of the different sizes of silk removed from the ligature box, and washed in several sterilized waters to remove the carbolic acid. It should then be wound on small glass spools, which are rendered aseptic by washing in a solution of bichloride, and the spools placed in a clean test tube, the end of which is tightly plugged with absorbent cotton. The tube, or ignition tube, as it is called, should be placed in the sterilizer for half an hour on three successive days and subjected to high temperature. The plug of cotton should not be removed until the silk is actually required for use.

Cat-Gut.—Cat-gut is exceedingly difficult to sterilize, as it contains a large proportion of fat, and is infected with germs from its very source, being made from the sub-mucosa of the intestines of sheep. The ready-prepared article found on the market is not trustworthy, and should not be used. Raw cat-gut should be soaked in ether for twenty-four hours to remove the fat. It should then be sterilized by boiling in alcohol. To do this effectually, the cat-gut should be wound on a glass reel, immersed in a bottle filled with absolute alcohol, and the mouth of the bottle tightly plugged with absorbent cotton. The bottle should then be placed in a water-bath, and boiled for five minutes on three successive days, care being taken that evaporation does not leave any part of the reel uncovered.

After the above process has been completed, if it is de-

sired to chromicize the cat-gut, and thus render it less absorbable, it can be done by placing it in a solution of one part chromic acid, 200 parts carbolic acid, and 4,000 parts distilled water, for forty-eight hours. Only a quantity of cat-gut equal in weight to the carbolic acid in the solution should be immersed, as a larger quantity would not be thoroughly chromicized, and a small quantity might be over-prepared. After being thus sterilized, or chromicized, cat-gut should be kept in absolute alcohol. When required for use, the quantity needed should be removed with surgically-clean hands, again boiled in alcohol, and placed in a tray containing a mixture of one part glycerine and nine parts alcohol, which gives the gut greater smoothness and pliability.

Silk-Worm Gut—Silk-worm gut can be rendered sterile by boiling, by baking, or by immersing in solutions of carbolic acid, or bichloride of mercury. The following method is an excellent one: The ragged ends of the strands are clipped, and the bunch put in a 1 per cent. alcoholic solution of methylin blue, where they should remain for twenty-four hours. This stains them a dark violet, and renders them more easily seen. They are then rinsed in water and soaked in a 1:1000 bichloride of mercury solution for twenty-four hours. They should be kept in absolute alcohol until needed.

DRAINAGE MATERIAL.—Drainage is usually effected by rubber tubing, glass tubes, strips of gauze, or strands of cat-gut.

Rubber drainage tubes should be prepared by first washing them well with soap and water and rinsing in clear water, then soaking for twenty-four hours in a 1:1000 solution of bichloride of mercury, and finally storing them in a glass jar containing a 5 per cent. solution of carbolic acid. Before using, the disinfectants should be removed by rinsing in boiled water.

Glass drainage tubes should be washed with soap and water, boiled for half an hour in a 1 per cent. solution of

carbonate of soda, and kept in a 5 per cent. solution of carbolic acid. Rinse in pure water before using.

Gauze drains are strips of aseptic gauze one yard long and about an inch wide. They should be cut by the draw-thread method, thus preventing ravelling. The strips are made in little rolls, and placed in a tube, and sterilized in the manner described for the sterilization of silk. When required for use, the plug of cotton should be removed, and the strips handed to the surgeon by means of sterilized forceps.

DRESSINGS—Cotton.—Reliable cotton can be purchased from dealers put up in cartoons. It may be well, however, to sterilize it again by baking in a hot-air oven for an hour before using.

Gauze.—Gauze can be purchased on the market, put up in hermetically-sealed jars, which is perfectly reliable. Except where very large quantities are used, it will be found more satisfactory, as well as economical, to use the preparation of some reliable manufacturer than to attempt its preparation.

The following are methods of making the varieties of gauze most commonly used :

Plain Aseptic Gauze.—Soak the cheese-cloth for one hour in a sud of soft soap and water to remove the "sizing," wash several times in clear water to free it from soap, and then steam in the sterilizer for an hour, and store in clean glass jars having well-fitting covers.

Bichloride Gauze.—Free the cloth from sizing and remove all traces of the soap, as in the previous process, and immerse it for several hours in a 1:1000 solution of bichloride of mercury, to which has been added a little glycerine. Then dry in the sterilizer and store in clean jars.

Carbolized Gauze is prepared in the same manner as bichloride gauze, except that a 5 per cent. solution of carbolic acid is used in place of the bichloride solution.

Iodoform Gauze is prepared by taking plain aseptic gauze and cutting it in three-yard lengths. Each length is placed

in an emulsion composed of ten drachms of iodoform and six ounces of soapsuds—the suds being formed by the addition of castile soap to sterilized water. After thoroughly rubbing the emulsion into the meshes of the gauze, it is gently squeezed, sprinkled lightly with glycerine, and dried in a hot-air oven at a low temperature. It should then be stored in colored glass jars.

Rubber Tissue.—In dressing wounds, strips, or sheets, of rubber tissue will frequently be used. They should be sterilized by soaking in a solution of 1:1000 of bichloride of mercury for an hour, and then rinsed in boiled water.

BANDAGES.—Dressings are secured in place by bandages of cotton or flannel. They should be rendered aseptic by heating in the sterilizer for an hour before using.

ART. II.—A Tabular Statement of the Affections of the Uvula and Tonsils in Children.

By W. A. NEWMAN DORLAND, A. M., M. D., Philadelphia, Pa.,

INSTRUCTOR IN GYNECOLOGY, PHILADELPHIA POLYCLINIC, ETC.

THE UVULA.

ABNORMALITIES AND DISEASES OF THE UVULA.

I. Bifid Uvula.

DERIVATION.—*Bifidus*, forked; *Uvula*, a little berry.

DEFINITION.—A rare congenital condition in which the uvula is divided into two portions, one of which is occasionally longer than the other, and which does not give rise to any trouble, and does not, as a rule, require treatment.

2. Uvulitis.

DERIVATION.—*Uvula*, a little berry; *itis*, inflammation.

DEFINITION.—An inflammation of the mucous membrane and substance of the uvula, usually an extension from a similar condition of the pharynx, giving rise to an enlargement of the organ with its accompanying symptoms.

ETIOLOGY.—1. *Exciting Causes.*

(1) Ingestion of irritants.

(2) Inflammation of the pharynx.

PATHOLOGY:

Macroscopic.—(1) *Uvula*, swollen, elongated, œdematous (*occasional*), intensely red (*usual*), pale (*in œdematous cases*), translucent, thick as the finger, hanging into the throat.

SYMPTOMS:

1. *Local*.—*Oro-pharynx*—*a*. Respiration, impeded; attacks of dyspnœa.
- b*. Sensation of tickling in throat.
- c*. Salivation, often profuse.
- d*. Deglutition, difficult; desire to swallow.
- e*. Hawking, frequent.

DIAGNOSIS.—Plain.

PROGNOSIS.—Good.

TREATMENT.—1. *Local*. (1) Astringent applications and gargles.

(2) Scarification.

(3) Amputation.

3. Elongation of the Uvula.

DEFINITION.—A chronic condition of the uvula, consisting in an hyperplasia of its tissues, with a corresponding increase in size, giving rise to irritation and distress in the throat, with frequent gagging and coughing.

ETIOLOGY.—1. *Predisposing Causes*.

(1) Chronic rhinitis (*Bosworth*).

2. *Exciting Causes*.

(1) Dropsical effusion.

(2) Relaxation of the soft palate.

PATHOLOGY:

1. *Macroscopic*.—(1) *Uvula*. *a*. Mucous membrane, swollen, slightly paler than normal; relaxed, resting on the tongue or extending into the larynx.

SYMPTOMS:

1. *Local*.—(1) *Oro-pharynx*—*a*. respiration, slightly impeded.
- b*. Voice, hoarse, slightly nasal; articulation imperfect.
- c*. Cough, frequent; suffocative paroxysms.
- d*. Expectoration, little or none.
- e*. Sensation of tickling.
- f*. Gagging, frequent.

DIAGNOSIS.—Plain.

PROGNOSIS.—Good.

- TREATMENT.—1. *Local.* (1) *Strong astringent applications by brush, twice daily, of*
a. Tannic acid.
b. Alum.
c. Sulphate zinc.
d. Tincture of ferric chlorid.
2. *Surgical procedures.*
a. Scarification (for œdema).
b. Amputation.
 (a) By scissors and forceps.
 (b) By uvulatome.
3. *After treatment.*
a. To arrest bleeding.
 (a) Compression with forceps.

THE TONSILS.

DISEASES OF THE TONSILS.

Tonsillitis.

DERIVATION.—Tonsilla, a rounded protuberance; *ιτις*, inflammation.

DEFINITION.—Any inflammation of the mucous membrane or of the substance of the tonsils.

- VARIETIES.—1. Acute.
 2. Chronic.

(1) Acute Tonsillitis.

- VARIETIES.—1. Acute catarrhal.
 2. Herpetic.

Acute Catarrhal Tonsillitis.

DERIVATION.—*καταρροος*, a running.

- SYNONYMS.—1. Quinsy.
 2. Amygdalitis.
 3. Acute inflammation of the tonsils.
 4. Inflammatio tonsillarum.
 5. Angina tonsillaris.
 6. Amygdalite (*French*).
 7. Entzündung der Mandeln (*German*).
 8. Angina tonsillare (*Italian*).

DEFINITION.—An acute catarrhal inflammation of the tonsils appearing clinically in several forms, and terminating, after a course of varying intensity, in resolution, suppuration or chronic enlargement.

- VARIETIES.—1. Superficial.
 2. Follicular.
 3. Parenchymatous.

Acute Superficial Tonsillitis.

SYNONYMS.—1. Acute erythematous tonsillitis.

DEFINITION.—An acute catarrhal inflammation of the tonsils expending itself mainly upon the mucous membrane, covering the surface of the organ without any special involvement of the lacunæ.

ETIOLOGY.—1. *Predisposing Causes.*

- (1) Age; rare in infancy, common from childhood to early adult life.
- (2) Sex; male.
- (3) Temperament; lymphatic.

2.—*Exciting Causes.*

- (1) Wetting of the feet.
- (2) Sudden arrest of perspiration.
- (3) Undue exposure.
- (4) Moist atmosphere.
- (5) Dampness of room or house.
- (6) Gastric and intestinal disturbances.
- (7) Poison of exanthemata.
- (8) Traumatism.
 - a. Inhalation of irritating vapors and gases.
 - b. Swallowing of acrid chemicals.
 - c. Impaction of foreign body in throat.

PATHOLOGY:

1. *Macroscopic.*—(1) Tonsils.—Mucous membrane dark red, swollen, dry, glistening (*early stage*); *later*, irregularly covered with slightly adherent grayish exudation.

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| (2) <i>Uvula,</i> | } reddened, swollen (<i>slightly</i>). |
| (3) <i>Soft palate,</i> | |
| (4) <i>Faucial pillars,</i> | |

(1) *Exudation*, composed of—

2. *Microscopic.*—a. Mucus.
 b. Epithelial cells.
 c. Pus cells.
 d. Serum.

SYMPTOMS:

1. *Prodromal Stage* (*frequently absent*)—(1) Malaise, general.
 (2) Headache, severe.

2. *Initial Stage*.—(1) Chilly sensation.

(2) Fever, slight, 100° – 101° F.

(3) Billiousness, marked.

(4) Nausea,) frequent.

(5) Vomiting,)

3. *Catarrhal Stage*.—[1] *Local*.—*a. Oro-pharynx*.

[a] Respiration, rapid, oral, snoring at night.

[b] Voice, usual

[c] Breath, foul.

[d] Tongue, coated.

[e] Cough, rare.

[f] Expectoration, painful, viscid, stringy, mucous.

[g] Deglutition, difficult, painful.

[h] Pain in the throat, increased by pressure, radiating to angle of jaw.

[i] Thirst, great.

[j] Sensation of heat.

b. Glands at angle of jaw, slightly swollen.

c. Ears. [a] Otalgia (*from pressure on posterior palatine fold*).

[b] Tinnitus.

[c] Hearing, impaired.

[2] *General*.

a. Malaise, general.

b. Anorexia, complete.

c. Fever, high, 102° – 103° F.

d. Pulse, rapid, 110–130; full.

e. Bowels, constipated.

f. Urine, scanty, high-colored, loaded with urates.

g. Rash on skin [*occasional*], evanescent.

h. Nervous. [a] Restlessness.

[b] Insomnia [*partial*].

[c] Delirium at night [*occasional*].

COMPLICATIONS.—1. Herpetic tonsillitis.

SEQUELÆ.—1. Aural. [1] Perforation.

DURATION.—Seven to ten days.

DIAGNOSIS.—From scarlatina, acute catarrhal pharyngitis and diphtheritic pharyngitis.

Acute Superficial Tonsillitis.

1. Rare in infancy, but may occur at any time up to an early adult age.
2. Invasion gradual.
3. Inflammation of the mucous membrane restricted; surface of the tonsils of a dark red color.
4. Redness of throat uniform.
5. Lingual papillæ not prominent as a rule.
6. Usually no cutaneous eruption.
7. If rash occurs it is slight, disappearing promptly under appropriate treatment, and not followed by desquamation.
8. Constitutional involvement, as a rule, not severe.
9. Fever high, 102°-103° F.
10. Urine non-albuminous.
11. Cervical glands slightly enlarged.
12. Never results fatally.

Scarlatina.

1. Peculiarly a disease of the early years of life.
2. Invasion very acute.
3. Inflammation of the mucous membrane widely diffused; surface of the throat of a brilliant red color.
4. Redness of throat punctiform.
5. Characteristic enlargement of the papillæ of the tongue.
6. Followed in twenty-four hours by the characteristic punctiform erythema.
7. Rash always runs its characteristic course, and is followed by the characteristic desquamation.
8. Constitutional involvement great.
9. Fever very high, 103°-105° F., or even 107° F.
10. Urine albuminous late in the course of the disease.
11. Cervical glands greatly swollen.
12. Frequently results fatally.

2 *From Acute Catarrhal Pharyngitis.**Acute Superficial Tonsillitis.*

1. Inflammation confined especially to the tonsils.
2. Tonsils swollen, dry, glistening, covered slightly with adherent grayish exudation.
3. Constitutional symptoms comparatively severe.
4. Swelling of cervical glands quite prominent.
5. Respiration rapid.
6. Cough rare.
7. Expectoration mucous, viscid, stringy.
8. Nausea and vomiting marked at the onset.
9. Pulse rapid, 110-130.
10. Occasional delirium.

Acute Catarrhal Pharyngitis.

1. Inflammation general over the mucous membrane of the pharynx.
2. Tonsils not enlarged, normal in appearance.
3. Constitutional symptoms comparatively slight.
4. Swelling of cervical glands slight.
5. Breathing, as a rule, not affected.
6. Cough frequently dry, tickling.
7. Expectoration mucopurulent or purulent, occasional blood-streaked.
8. No nausea nor vomiting as a rule.
9. Pulse but slightly accelerated.
10. No delirium.

3. *From Diphtheritic Pharyngitis.*

Acute Superficial Tonsillitis.

Diphtheritic Pharyngitis.

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|---|---|
| 1. Invasion acute(?), with no pronounced prodromal stage. | 1. Invasion gradual, with well-marked prodromal stage. |
| 2. Swelling and redness confined to the tonsils. | 2. Swelling and redness involving the soft palate and pharynx as well as the tonsils. |
| 3. Tonsils irregularly covered with a slight exudation. | 3. Formation of the characteristic false membrane in the pharynx. |
| 4. Eyes bright | 4. Eyes dull, suffused. |
| 5. Prostration slight. | 5. Prostration great. |
| 6. Bowels constipated as a rule. | 6. Bowels frequently loose. |
| 7. Urine non albuminous. | 7. Urine albuminous. |
| 8. Fever sharp, sthenic. | 8. Fever slight, æsthenic. |
| 9. Fever results fatally. | 9. Frequently results in death. |
| 10. Frequently followed by suppuration of the tonsil. | 10. Never followed by suppuration of the tonsil. |
| 11. Never followed by paralysis. | 11. Frequently followed by paralysis |

PROGNOSIS.—Good.

TREATMENT.—1. *Local*.—[1] *Sedatives to throat.*

a. Sucking of ice.

b. Cold water compresses.

c. Linseed-meal poultices.

[2] *Astringent gargles and sprays.*

[3] *Insufflations.*

a. Powdered bicarbonate of soda.

[4] *Counter-irritation to angle of jaw.*

a. Compound tincture of iodine.

2. *Constitutional*.—[1] *Febrifuges.*

a. Tincture of aconite root, gtt. $\frac{1}{4}$ to $\frac{1}{2}$ every $\frac{1}{4}$ to 1 hour.

b. Tincture of belladonna, gtt. $\frac{1}{4}$ to $\frac{1}{2}$ every $\frac{1}{4}$ to 1 hour.

2. *For the Bowels.*

a. Calomel, grs. i-ij., followed by Rochelle salt, 5ij.

b. Sulphate of magnesia, small doses.

3. *Hygienic*.—[1] Isolation in room or bed.

[2] Avoidance of exposure.

4. *Convalescence*.—[1] *Tonics*:

a. Quinin.

b. Bitters.

c. Iron.

DIET.—Light, nutritious soups, milk, eggs, milk-toast, gruels, custard, rice-pudding, port wine [*Eustace Smith*].

FORMULÆ.—1. Laxative magnesia mixture [*Beverly Robinson*]:

R_y.—Magnesii sulph..... $\bar{5}$ ij
 Quin. sulph..... gr vj
 Acidi sulph. dil..... gtt. xx
 Syr. zingib..... $\bar{5}$ ss
 Aquæ q. s. ad $\bar{5}$ ij

M. S.—Two tablespoonfuls every three hours to a child of three or four years.

2. Sedative astringent gargle [*Beverly Robinson*]:

R_y.—Thymol..... gtt. ij
 Acidi. carbol. liq..... m xxx
 Boracis..... $\bar{5}$ iss
 Glycerini..... $\bar{5}$ vj
 Aquæ..... q. s. ad $\bar{5}$ vi

M. S.—Use as a gargle or with the atomizer.

(b) **Acute Follicular Tonsillitis.**

DERIVATION.—*Follicus*, a little bag of leather; *itis*, inflammation.

- SYNONYMS.—1. Acute lacunar tonsillitis.
 2. Follicular catarrh of the tonsils.
 3. Cryptic tonsillitis.

DEFINITION.—An acute, catarrhal inflammation of the tonsils, of common occurrence among children, characterized by an involvement not merely of the mucous membrane covering the surface of the tonsils, but also to a greater or lesser extent of that lining the interior of the lacunæ or crypts of the organs.

ETIOLOGY.—1. *Predisposing Causes.*

- [1] Poor sanitary surroundings.
- [2] Overheated and vitiated atmosphere.
- [3] Impure drinking-water.
- [4] Rapid changes of temperature.

2. *Exciting Causes.*

- [1] Some unknown specific germ (?).
- [2] Contagium of special diseases.
 - a. Measles.
 - b. Scarlatina.
 - c. Diphtheria.

PATHOLOGY:

1. *Macroscopic.*—[1] *Tonsils.* a. Mucous membrane greatly swollen, reddened..

b. Mouths of crypts, filled with small, white, yellowish-white or brown, pultaceous, cheezy-looking, friable, elevated masses.

c. Rarely these spots may coalesce to form white patches.

- [2] *Uvula*,) Mucous membrane red-
- [3] *Pharynx*,) dened, swollen.
- [1] *Exudation*. a. Composed :

2. *Microscopic*.—
- [a] Mucus.
 - [b] Pus-cells.
 - [c] Epithelial cells.
 - [d] Serum.
 - [e] Numerous bacteria and micrococci.
 - [f] Cholesterin crystals [*occasional*].

SYMPTOMS.—1. *Local*. [1] Respiration accelerated, snoring at night.

- [2] Voice stuffy.
- [3] Deglutition, painful, at times extremely so.
- [4] Gagging,) frequent.
- [5] Hawking,)

2. *General*.—[1] Chilly sensation; decided chill [*occasional*].

- [2] Headache, severe.
- [3] Anorexia, complete.
- [4] Fever, rapidly running to 104° or 105° F. in twenty-four hours, soon declining.
- [5] Bowels, constipated.
- [6] Depression, marked, persistent.
- [7] Urine, febrile, scanty, high-colored, non-albuminous.
- [8] Nervous.

a. *Insomnia*, partial.

DURATION.—Four or five days.

DIAGNOSIS.—1. *From diphtheritic pharyngitis; herpetic tonsillitis*

Acute Follicular Tonsillitis.

Diphtheritic Pharyngitis.

- | | |
|--|---|
| <p>1. Invasion very acute.</p> <p>2. Usually ushered in with chilly sensations or decided rigor.</p> <p>3. Deposit whitish, or yellowish-white, elevated, in small areas, thick, cheesy, friable easily removed, leaving no ulceration or abrasion of tissues beneath; it is also soluble in water.</p> <p>4. Deposit limited to the tonsils.</p> <p>5. Membrane, when removed from a small area of the tonsils, shows no tendency to re-form.</p> | <p>1. Invasion acute, but usually with the history of some preceding indisposition.</p> <p>2. Chilly sensations, or chills rare in the outset.</p> <p>3. Membrane grayish, not elevated, continuous, tough, adherent, and, when torn away, leaving a raw and bleeding surface beneath; it is insoluble in water.</p> <p>4. Patches of membrane upon the uvula and soft palate.</p> <p>5. Membrane, if removed, reforms within twelve hours.</p> |
|--|---|

- | | |
|---|--|
| 6. Tonsils greatly enlarged, nearly closing the throat | 6. Tonsils but slightly enlarged. |
| 7. Temperature rises rapidly, is not excessive, and soon declines. | 7. Temperature usually very high and persistent. |
| 8. Pain and discomfort in the throat very pronounced. | 8. Pain and discomfort in the throat but slight in the early stage. |
| 9. Urine contains no albumen. | 9. Urine usually contains a large quantity of albumen. |
| 10. Patches disappear in two or three days under proper treatment. | 10. Membrane persistent through the characteristic course of the disease. |
| 11. Never fatal. | 11. Frequently fatal. |
| 12. Under the microscope the exudate is found to be composed of mucus mainly, with pus cells, epithelial cells, and cholesterol crystals. | 12. Under the microscope the membrane is composed mainly of fibrin and epithelial cells. |
| 13. Bacteriologic examination reveals no characteristic bacilli. | 13. Bacteriologic examination shows the presence of the Klebs-Löffler bacillus. |

2. *From herpetic tonsillitis* [vide].

PROGNOSIS.—Good.

TREATMENT.—1. *Local*. [1.] Clear out crypts [*with scoop under cocaine anæsthesia*.]

[2.] *Astringent gargles and sprays*.

a. Benzoat of sodium.

b. Hot water.

[3.] *Astringent applications to throat*.

a. Sulphat of zinc.

b. Tincture ferric chlorid, 5i-ij to 3j glycerin.

c. Solution of alum,

d. Solution of nitrat of silver, } Velpeau.

[4.] *Anodyne applications*.

a. Sucking of ice.

b. Cold compresses.

c. Inhalation of vapor impregnated with—

[a] Benzoin.

[b] Paregoric

[c] Sage.

2. *Constitutional*. [1] *Febrifuges*.

a. Tincture of aconit root, $\frac{1}{4}$ – $\frac{1}{2}$ drop every $\frac{1}{4}$ to 1 hour.

[2] For the bowels.

a. Laxatives.

b. Castor oil.

- [3] Guaiacum.
- [4] Chlorat of potassium.
- [5] Tonics.
 - a. Iron.
 - b. Quinin.
 - c. Bitters.

FORMULÆ.—1. To take castor oil [*Bristol Med. Chirur. Jour., Dec., 1889*].

Thoroughly mix the dose with about four times as much hot milk, which can be most effectually done by shaking the two together in a bottle which is not more than one-half filled. This resembles rich milk and is palatable.

2. Iron mixture [*almost a specific—Bosworth*].

Rx.—Tinct. ferri perchlorid, ʒj
Glycerini ʒij

M. S.—A tablespoonful every two hours.

(c) Acute Parenchymatous Tonsillitis.

DERIVATION.—*παρενχυμα*, parenchyma.

SYNONYMS.—1. Deep tonsillitis.

2. Suppurative tonsillitis.

3. Phlegmonous tonsillitis.

4. Suppurative quinsy.

DEFINITION.—An acute catarrhal inflammation of the substance of one or both tonsils, rather rare in children, and, when occurring in them, tending usually toward resolution; but, as encountered later in life, ending in suppuration, with the formation of an abscess in the organ itself, or in the peri-tonsillar connective tissue.

ETIOLOGY.—1. *Predisposing causes.*

- [1] Heredity.
- [2] Age, adolescence and early adult.
- [3] Diathesis, gouty or rheumatic.
- [4] Chronic hypertrophy of the tonsils.

2. *Exciting causes.*

- [1] Draughts.
- [2] Atmospheric changes.
- [3] Wet clothing.

PATHOLOGY:

1. *Macroscopic.*—(1) *Tonsils*, enlarged greatly, red; surface glossy; follicles, closed and swollen; *later*, covered with creamy streaks; and after evacuation of abscess, marked loss of substance of gland.

(c) Yellow spot on surface of inflamed tonsil at end of five or six days (*Eustace Smith*).

(d) Pointing of abscess.

a. Anteriorly, toward buccal cavity (*usual*).

b. Posteriorly, toward angle of jaw (*rare*).

(e) Sudden bursting of abscess.

(f) Gush of pus from mouth.

(g) Relief of symptoms

(2) *General*.—a. Rigors, repeated.

b. Subsidence of symptoms on evacuation of pus.

COMPLICATIONS.—Acute follicular tonsillitis.

DURATION.—Twenty-four hours to ten days.

SEQUELÆ.—1. *Aural*.—(1) Otitis media.

(2) Perforation of ear-drum.

2. *Local*.—(1) Paralysis of soft palate and pharynx (*Broadbent, Knight, Lichtwitz*).

DIAGNOSIS.—Plain.

PROGNOSIS.—Anxious.

CAUSE OF DEATH.—1. Suffocation (*Rilliet et Barthez*).

2. Edema of glottis.

3. Ulceration of internal carotid (*Norton*).

4. Inanition—in infants (*rare*).

TREATMENT.—1. *Local*.—(1) *Anodyne Applications*:

a. Sucking of ice.

b. Cold compresses.

c. Inhalation of vapor impregnated with—

(a) Chamomile.

(b) Hops.

(c) Carbolic acid.

(2) *Gargles*:

a. Ammoniated tincture of guaiacum (*Cohen*).

(3) *Lozenges*:

a. Guaiacum.

b. Rhatany.

(4) Scarification of tonsil.

(5) Friction of skin of neck with—

a. Stokes' liniment.

b. Compound soap liniment.

c. Camphor liniment.

d. Ichthyol ointment, 50 per cent.

2. *Constitutional*.—(1) *Febrifuges*:

a. Tincture of aconite root.

b. Antifebrin.

(2) *For the bowels :*

a. Calomel.

b. Magnesia sulphate.

(3) *Emetics :*

a. Powdered ipecac, grs. ij-v.

(4) Bichloride of mercury, gr. $\frac{1}{8}$ th- $\frac{1}{16}$ th every 2 hours (grave cases).(5) *For rheumatic or gouty diathesis :*

a. Salts of potassium.

b. Salicylates.

c. Oil of gaultheria.

3. *Convalescence.*—(1) *Tonics :*

a. Infusion of cinchona

b. Infusion of gentian.

c. Infusion of quassia.

d. Quinia.

e. Iron.

FORMULÆ.—1. *Tonic (Beverly Robinson) :*R_x.—Quinia bisulph gr. xx

Tinct. ferric chlorid... ʒj

Syr zingiberis. ʒj

Aquæ..... ad. ʒiij

M. S.—Two teaspoonfuls thrice daily after meals through a glass tube.

2. *Stokes' Liniment :*R_x.—Olei terbinth. ʒiij

Ovi. recentis. No. j

Olei limonis. m lx

Acidi acetic..... m ccc

Aquæ rosæ. ʒjss

M. S.—Shake when used.

3. *Gargle (Cohen) :*R_x.—Tinct. guaiac. ammon... ʒiv

Tinct. cinchona co.... ʒij

Mellis..... ʒvj

Infus. coca..... ʒij

Sodii salicylici..... ʒiss

Aquæ..... q. s. ad. ʒvj

M. S.—Tablespoonful as a gargle every half to 2 hours.

2. **Herpetic Tonsillitis** (*Rilliet et Barthez*).DERIVATION : $\epsilon\rho\pi\gamma\varsigma$, herpes.

SYNONYMS :

1. Ulcero-membranous tonsillitis.

2. Ulcero-tonsillitis.

3. Membranous tonsillitis.
4. Ulcero-membranous angina (*Da Costa*).
5. Ulcero-membranous sore throat.
6. Herpes guttural (*Gubler*).

DEFINITION.—An acute, contagious, rather rare, inflammation of the tonsils, pre-eminently a disease of childhood or adolescence, attacking individuals in perfect health, due to a special unknown poison, milder in its action than that of diphtheria, and characterized by the deposit upon the tonsils of a follicular exudation, which sooner or later disappears, leaving small spots of superficial ulceration.

ETIOLOGY:

1. *Predisposing Causes*:
(1) Chronic irritation of the throat.
2. *Exciting Causes*:
(1) An unknown specific poison.

PATHOLOGY:

1. *Macroscopic*.—(1) *Tonsils*.—*a*. Mucous membrane, reddened, swollen, covered with a slight membranous envelope.
b. Follicles, mouths red, slightly eroded, covered with a yellowish exudation, which is limited to the follicles and easily removed (*first stage*); *second stage*, disappearance of the small yellow spots replaced by raw spots of superficial ulceration.
- (2) *Half arches*,) *a*. Mucous membrane, swollen, reddened.
- (3) *Soft palate*,)
(4) *Pharynx*.—*a*. Mucous membrane, swollen, reddened.
b. Follicles of posterior wall, red and prominent; no deposit of exudation.
2. *Microscopic*.—(1) *Exudate*.—*a* Composed of—
(*a*) Mucus.
(*b*) Pus cells.
(*c*) Epithelial cells.
(*d*) Sebaceous matter.

SYMPTOMS:

1. *Initial or vesicular stage*. [*Duration, 5-6 days.*]—(1) *Local*:
a. Oro-pharynx.—[*a*] Tongue, heavily coated.
[*b*] Breath, foul.
[*c*] Deglutition, not much interfered with; slightly painful [*occasional*].

- [*d*] Pain in throat, sharp, shooting, radiating to angle of jaw.
- [*e*] Eruption of herpetic vesicles on tonsils within 24 hours; both organs involved, one more than the other.
- b. Cervical glands.*—[*a*] Swollen, bilaterally, but most marked upon one side.
- [*b*] Submaxillary gland painful, prominent, hard.
- [*c*] Other lymphatics not enlarged.
- [2] *General.*—*a.* Anorexia, complete.
- b.* Nausea, } occasional.
- c.* Vomiting, }
- d.* Bowels, slight diarrhoea [*occasional*].
- e.* Chill, or chilly sensations.
- f.* Fever, slight; morning remissions, evening exacerbations; skin slightly heated.
- g.* Pulse, slightly accelerated.
- h.* Urine, febrile, scanty, high-colored.
2. *Stage of Ulceration.* [*Duration, 5-10 days.*].—1. *Local:*
- a. Oro-pharynx.*—[*a*] Tongue, heavily furred; follicles prominent at places.
- [*b*] Lips and cheeks, contain fever blisters, large.
- [*c*] Spots of superficial ulceration on tonsils.
- b. Cervical glands.*—[*a*] Hard, less swollen.
2. *General.*—*a.* Malaise, marked; feeling of languor, wretchedness.
- b.* Prostration, excessive.
- c.* Countenance, pallid.
- d.* Fever, slight; skin moist, rather cool.
- e.* Pulse, slightly accelerated.
- f.* Urine, increased in amount; pale, non-albuminous.

COMPLICATIONS.—1. Parotitis [*rare*].

DURATION.—Two to three weeks.

DIAGNOSIS.—1. From acute follicular tonsillitis; diphtheritic pharyngitis.

Herpetic Tonsillitis.

1. Pre-eminently a disease of childhood.
2. Both tonsils slightly enlarged, with no encroachment on the lumen of the throat
3. Characterized by a follicular exudation upon the tonsil, with a thin, non-adherent, membranous envelope over the surface which in the later stage is replaced by small superficial ulcerations.
4. Accompanied by pronounced inflammation and swelling of the adjoining mucosa.
5. Deglutition slightly painful.
6. Always accompanied by extensive implication of the cervical glands.
7. Fever, slight, irregular.
8. Prostration, great.
9. Bowels, frequently loose
10. Duration two to three weeks.

Acute Follicular Tonsillitis.

1. Common in childhood, but may occur at any age.
2. Tonsils greatly enlarged, almost completely blocking up the throat.
3. Characterized by an inflammation of the follicles of the tonsil, with the production of small elevated, whitish, yellowish, or brownish, cheesy-looking masses in the follicles easily removed without any ulceration of the mucous membrane
4. Swelling and redness of the adjacent parts slight.
5. Deglutition at times extremely painful.
6. No marked involvement of the cervical lymphatics.
7. Fever, rapidly rising, high, soon declining.
8. Prostration, decided but not excessive.
9. Bowels, usually constipated.
10. Duration, four to five days.

2. *From Diphtheritic Pharyngitis.*

Herpetic Tonsillitis.

1. Invasion abrupt.
2. Usually ushered in with a chill or chilly sensations.
3. Exudation follicular, non-adherent, easily removed, with no tendency to spread, followed by slight superficial erosion of the mucous membrane.
4. Exudation limited to the tonsils.
5. Exudation shows no tendency to re-form if removed.
6. Fever, low, irregular.
7. Urine contains no albumen.
8. No or slight obstruction to respiration.
9. Patient always recovers.
10. Never followed by paralysis.

Diphtheritic Pharyngitis.

1. Invasion usually acute, but with a history of some preceding indisposition.
2. Chill or chilly sensations rare in the onset of the disease.
3. Exudation thick, tough, grayish, membranous, closely adherent, with very great tendency to spread to adjoining parts, and on removal leaving a raw and bleeding surface.
4. Exudation involves the pharynx and adjoining regions.
5. Membrane, if removed, speedily re-forms.
6. Fever, slight, asthenic.
7. Urine usually albuminous.
8. Great obstruction to respiration.
9. Frequently proves fatal.
10. Frequently followed by paralysis.

PROGNOSIS —Good.

TREATMENT:

1. *Hygienic*.—[1] Room well-ventilated, airy, temperature 64°-70° F.
[2] Clothing, warm, sufficient.
2. *Local*.—[1] *Gargles*;
a. Chlorate of potash and claret [*Da Costa*].
b. Sage-tea and alum.
[2] Poultices around neck.
3. *Constitutional*.—[1] *Febrifuges* :
a. Antipyrin.
b. Antifebrin.
[2] *Diaphoretics*.
[3] Acetat of ammonium.
[4] Tincture of ferric chloride.
[5] Quinia.

DIET.—Milk, nourishing broths, stimulants [*small amounts*].

[II] **Chronic Tonsillitis.**

VARIETIES —1. Chronic catarrhal.

a. *Chronic Catarrhal Tonsillitis.*

SYNONYMS:

1. Chronic enlargement of the tonsils.
2. Hypertrophy of the tonsils.
3. Tonsillar hypertrophy.
4. Tonsillæ intumescences.
5. Hypertrophie des amygdales [*French*].
6. Hypertrophie der Tonsillen [*German*].
7. Tonsille Ipertrofiche [*Italian*].

DEFINITION.—A chronic inflammation of the tonsils characterized by a permanent enlargement of these organs due to an hypertrophy of the normal elements of their structure, and associated with marked impairment of their function.

VARIETIES:

1. Hypertrophic.—*Glandular tissue mainly affected. Tends to continuous growth.*
2. Hyperplastic.—*Increase solely of fibro-cellular stroma. Tends to disappear at puberty.*
3. The two forms combined, congenital or acquired.

ETIOLOGY:

1. *Predisposing Causes* :
[1] Age, youth.
[2] Heredity.
[3] Diathesis, strumous.

- [4] Bad hygienic surroundings.
- [5] Lack of sunlight and fresh air.
- [6] Damp dwellings.
- [7] Poor and insufficient food.
- [8] Repeated acute attacks.

2. *Exciting Causes* :

- [1] Irritation of primary dentition.
- [2] Poison of scarlet fever and diphtheria.
- [3] Sexual disorders.
- [4] Syphilis, hereditary or acquired.
- [5] Digestive disorders.
- [6] Sewer-gas poison.

PATHOLOGY :

1. *Macroscopic*.—[1] *Tonsils* enlarged, indurated, projecting into the throat.
 - a. *Size*, chestnut to a small egg.
 - b. *Color*, light to dark red.
 - c. *Consistency*, firm, elastic, at times soft.
 - d. *Shape*, rounded.
 - e. *Surface*, smooth, glistening [*hyperplastic*], rough, irregular, ragged [*hypertrophic*]; covered with yellow, curdy secretion [*occasional*]; ulcerated superficially from friction [*occasional*]; adherent to faucial pillars [*frequent*]; cuts with creaking noise.
 - f. *Crypts* [*follicles*], increased in number, filled with caseous concretions.
 - g. *Cut section*, color, livid or dark red, pale red, brick red, yellowish.
- [2] *Pharynx*.—a. Mucous membrane, congested, relaxed.
2. *Microscopic*.—[1] *Tonsils*.—a. Capsule, thickened, indurated, softened [*E Vidal*].
 - b. Epithelial cells of follicles, granular, increased in number.
 - c. Papillæ beneath epithelium, increased in number, less elevated [*McKenzie*].
 - d. Acinous, mucous glands, destroyed.
 - e. Inter-follicular stroma,
 - f. Deep fibro-cellular stroma, } hyperplastic.
 - g. Blood-vessels of connective tissue, dilated, increased in number.

SYMPTOMS :

1. *Local*.—[1] *Nose*.—a. Posterior nares obstructed.
- b. Anosmia, partial.
- c. Skin swollen.

- [2] *Oro-pharynx*.—*a*. Respiration, imperfect, oral, audible, labored [*occasional*], dyspnœa, snuffling; suffocative attacks at meals or in sleep [*occasional*]; loud snoring [*due to narrowing of fauces*].
b. Voice, thick, muffled, nasal twang [*Beverly Robinson*], easily fatigued; articulation imperfect.
c. Breath foul [*due to decomposition of cheesy matter*].
d. Nursing, interfered with.
e. Tongue, white or yellowish fur.
f. Sense of taste, impaired.
g. Sensation of dryness in throat.
h. Deglutition, uncomfortable, difficult at times; desire to aid it by drinking water while eating.
i. Cough, dry, hacking, distressing, suffocative, paroxysmal.
j. Mucous secretion of the pharynx, increased.
k. Oozing of blood from tonsils, nocturnal, staining pillow.
- [3] *Face*.—*a*. Expression, idiotic.
- [4] *Eyes*.—*a*. Surrounded by dark circles.
- [5] *Ears*.—*a*. Hearing, impaired.
b. Tinnitus.
- [6] *Cervical glands*, enlarged, especially on one side.
2. *General*.—[1] Malaise, general; languor, marked.
[2] Failure of health, gradual.
[3] Tendency to take colds, great.
[4] Prostration, marked.
[5] Anorexia, partial.
[6] Gastric catarrh, frequent attacks,
[7] Bowels, distended, torpid; passages hard, light in color, very offensive. considerable flatulence.
[8] Nervous.—*a*. Insomnia, persistent.
b. Restlessness.
c. Incoherent talk in sleep.

COMPLICATIONS.—1. Rickets.
2. Scrofula.

SEQUELÆ.—1. *Nasal*.

- [1] Displaced upward, appearance pinched.
[2] Dilatation of anterior nares [*Meigs and Pepper*].
[3] Lack of development of no trils [*Simon*].

2. *Osseous system*.

- [1] Change in formation of upper jaw.
[2] Change in formation of thorax.
[a] Pigeon breast [*Dupuytren Schaw*].

3. *Cardiac.*

[1] Hypertrophic dilatation [*Bosworth*].

4. *General.*

[1] Anæmia.

[2] Chronic gastric catarrh.

DURATION.—Protracted.

DIAGNOSIS.—1. From retro-pharyngeal abscess.

Tonsillar Enlargement.

1. Swelling situated in either side in the tonsil
2. Soft palate usually not displaced.
3. Tumor firm and elastic to the touch.
4. Deglutition uncomfortable, at times difficult.
5. Attacks of choking infrequent.
6. Breathing labored, but rarely dyspnoic.
7. No regurgitation of ingesta.
8. Glandular swelling of the neck.
9. No torticollis.
10. No fever, chills, or indications of the formation of pus.
11. Duration very chronic.
12. Never fatal.

Retro-Pharyngeal Abscess.

1. Swelling situated in the median line.
2. Soft palate pushed forward.
3. Tumor fluctuating and elastic to the touch.
4. Deglutition markedly interfered with.
5. Attacks of choking frequent during deglutition.
6. Dyspnoea very marked.
7. Frequent regurgitation of ingesta.
8. Diffused swelling of the deep cellular tissues.
9. Torticollis marked.
10. Sooner or later, manifestations of pus formation; rigor, pyrexia.
11. Course very acute.
12. Occasionally fatal.

PROGNOSIS.—1. Good, as regards life.

2. Grave, as regards sequelæ.

TREATMENT.—1. *Hygienic.*

- [1] Daily cold water bathing.
- [2] Wearing of proper clothing.
- [3] Wearing of thick-soled shoes.
- [4] Change of air—to country or seashore.
- [5] Regulation of the bowels.

2. *Local.*

- [1] *To angle of jaw*
 - [1] Cold water daily.
 - [2] Tincture of iodin.
 - [3] Compound iodin ointment.
- [2] *To tonsils* [1] *Astringent applications twice or thrice weekly.*
 - a. Compound tincture of iodin, dilute [*Bosworth*].
 - b. Tinctura iodi } equal parts [*E. Smith*].
 - Liquor potassæ }

- c. Tincture ferric chlorid 5j—ij to 3i glycerine twice or thrice daily [*B. Robinson*].
 - d. Powdered alum.
 - e. Solution of silver nitrate.
 - f. Solution of sulphat of copper.
 - g. Recent ox-gall.
 - h. Glycerite of tannin.
 - i. Powdered alum, } equal parts on moistened pharyngeal spatula [*Mackenzie*].
 - [2] *Insufflations of*
 - a. Powdered alum and tannin, equal parts [*Sajous*].
 - [3] *Sprays of*
 - a. Sulphur water [*Lambeau*].
 - b. Solution of silver nitrat, gr. 10—20 to 3i.
 - [4] *Intra parenchymatous injections weekly.*
 - a. Dilute acetic acid [*M. Mackenzie*],
 - b. Carbohc acid [*Cohen*],
 - c. Iodin,
 - d. Ergotin,
 - [5] *Cauterization (under cocain, 4 per cent. solution, anæsthesia).*
 - a. Galvano cautery [*Curtis, Knight*].
 - b. Chromic acid, saturated solution [*excellent*].
 - c. Lunar caustic.
 - d. London paste [*M. Mackenzie*]. *Painful and tedious.*
 - [6] *Electrolysis* [*Cohen*].
 - [7] *Mechanical.*
 - a. Frequent compression of tonsils with fingers [*Cohen*].
3. *Constitutional.* [1] *For bowels.*
- a. Compound licorice powder.
 - b. Emulsion of castor oil.
 - [2] *Alteratives.*
 - a. Syrup of iodid of iron.
 - b. Syrup of lacto-phosphate of lime.
 - c. Cod liver oil.
 - d. Quinin.
 - e. Iodid of potassium.
 - f. Sulphur water [*Lambeau*]
 - g. Phytolacca.
 - h. Stillingia.
 - i. Sarsaparilla.

[3] *To reduce size of tonsils.*

- a. Sulphid of calcium, } several times daily
Iodoform, aa gr. ss., } [X. Browne].
- b. Sulphate of potassium.
- c. Chlorid of ammonium.
- d. Chlorid of calcium.

4. *Surgical* [1] *Tonsillotomy.*

- a. By tonsillotome (*under cocain anæsthesia*).
 - a. Mackenzie's modification of physics.
 - b. Mathieu's modification of Fahnstock's.
- b. By knife.
- c. By cold wire ecraseur [Jarvis].
- d. By galvano-cautery loop.

[2] *For hæmorrhage.*

- a. Loosen garments about neck and chest.
- b. Cold water to drink.
- c. Sucking of ice.
- d. Hot douches [Davidson's syringe].
- e. Torsion by tenaculum [Lewis].
- f. Tanno-gallic acid gargle.
- g. Styptic colloid.
- h. Actual cautery,
- i. Ligation of carotid, } in extreme cases.

[3] *After treatment.*

- a. Rest in house for several days.
- b. Emollient gargles.
- c. Demulcent lozenges.
- d. Daily cool bathing.
- e. Friction of body.
- f. Astringent applications, *if healing is protracted or membrane forms.*
 - a. Silver nitrate.
 - b. Iodin.
 - c. Tannin.

DIET.—Light, nutritious; avoidance of sweets and farinaceous foods in excess; may consist of broths, milk, eggs, roast and broiled meats, stale bread, claret or port wines (*small amounts*).

FORMULÆ.—1. *London Paste.*

R_y.—Caustic lime.
Sodaāā equal parts.
Alcohol q. s.

M. S.—Apply as needed.

2. *Tanno-gallic Acid Gargle (Throat Hospital Pharmacopeia).*

R_y.—Acid tannic.....gr. cccix
 Acid gallic.....gr. cxx
 Aquæ.....℥i

M. S.—Half a teaspoonful slowly sipped at short intervals.

3. *Styptic Colloid.*

R_y.—Collodion.
 Alcohol.
 Tannin aa. q. s.

M. S.—Apply directly to bleeding surface to form a firm coagulum.

ART. III.—The Therapeutic Value of Strychnia.*

By CLIFTON MAYFIELD, M. D., of Washington, D. C.

In this day of elegant pharmaceutical products and new remedies that tempt us into untried paths, it is too frequently the case that the older and well-proven drugs are forgotten or seldom used.

While strychnia has never yet fallen into disuse, my observations lead me to believe that the frequency of its administration is not such as its therapeutic value warrants. For this reason, I desire briefly to call your attention to the effects to be expected from its use, and to some of the morbid conditions in which I have used it with good results.

The effects of strychnia are principally upon the spinal cord and the medulla. As a result of its stimulation of the centres of circulation and respiration, arterial pressure is increased, cardiac diastole is lengthened and systole strengthened, and respiration becomes slower and deeper.

Dr. H. C. Wood, in his work on *Therapeutics*, says that strychnia has no more effect upon the circulation than the simple bitters. Other authorities, notably Dr. W. H. Pot-

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, on October 9th, 1893.

ter, entertain a contrary view; and I believe that chemical observation will sustain the statement that its effect upon the heart is marked.

Rokitanski found that injections of strychnia, previous to division of the cord, just below the medulla, prevented the respiratory movements from being abolished, or caused them to re-appear when they had stopped after section.

Gamper has found, by observations upon dogs, that strychnia increases the amount of gastric juices secreted; and Drs. Hofmeister and Vohl, that it increases the number of white-blood corpuscles; and further, that these corpuscles serve a very active part in the process of assimilation and nutrition, taking up the peptone formed in digestion, and carrying and distributing it to the tissues of the body.

The dose of strychnia ordinarily administered is, according to my experience, too small to prove efficient. As a tonic, alone or in combination, I usually prescribe not less than one-forty-eighth of a grain to an adult of medium weight; but where a more specific effect is desired, as upon the heart or respiratory organs, I give at times as high as one-twentieth of a grain three or four times a day, or oftener, and I have never yet observed any other than good results, even though it was administered for some time.

Recent disclosures of the lines of treatment pursued in quack institutes, only serve to emphasize what has long been known of the value of strychnia in the treatment of inebriety.

Personally, I have had no experience with it in treating acute alcoholism; but I can speak words of high praise as to its effect upon the chronic alcoholic. Appetite is restored, sleep is induced, and the various nervous symptoms lessened even where a moderate indulgence is continued. In many cases of neuralgia, more especially in anæmic individuals, I have found that it will oftentimes not only relieve, but absolutely cure.

In convalescence from acute fevers it is the typical tonic,

improving digestion and assimilation, and strengthening heart action.

Dr. W. H. Porter, in a series of lectures delivered at the New York Post Graduate Medical School, treated of the subject of cardiac stimulants and tonics very exhaustively. A cardiac stimulant, he defines as "a remedy that calls into action the intrinsic or stored-up motor power of the cardiac muscles, but without directly effecting its nutritive condition." Of the cardiac tonic, he says, "its ultimate results is the development of a higher degree of muscle power by the formation of an increased volume of muscle protoplasm, and not alone by simply calling into action stored-up motor power at the expense of the vitality of the muscular elements;" in this former class he places alcohol, digitalis and strophanthus. In the latter, ammonia, atropine, opium and strychnia. In addition to its merely stimulant effect, digitalis, he says, poisons the heart muscles.

Some years ago, I became dissatisfied with the final results obtained from the use of full doses of digitalis in heart affections, for it seemed to me that while the immediate effect in slowing and strengthening heart action was pronounced, yet the ultimate failure of compensation was hastened rather than retarded.

For the last four or five years, I have relied almost entirely upon strychnia alone, or with ammonia. Digitalis I rarely use, and then only for its immediate stimulant, or for its diuretic effect. With the former, I have obtained most satisfactory results; the tone of the heart-muscle is improved, and compensation is effected and is prolonged beyond the period of administration, because the amount of contractile tissue is increased. The building up process is the result, not alone of the effect upon the circulatory centre, but because the nutrition of the heart, as of the rest of the body, is improved by reason of the action of the drug upon the digestive process.

In neurasthenia, in which the digestive function is always imperfect, as also in chronic indigestion of all types, strychnia has been of great service to me. It stimulates

the digestive organs to increased activity, and then, by its effect in the multiplication of white blood corpuscles, provides the means for the more rapid and effective distribution of the product of digestion to the tissues for their nutrition. This is, indeed, to a considerable extent, an explanation of its usefulness in all conditions in which it is prescribed with benefit.

My experience with strychnia in diseases of the respiratory organs has not been as extensive as in heart and stomach affections, but has been sufficient to impress me with its value in chronic bronchitis and pulmonary tuberculosis. Just how much of the benefit obtained may be referred to improved circulation and nutrition, and how much to the direct effect upon the respiratory centre and the pneumogastric nerve, I am not prepared to say. Of this I am sure:—by its use, respiration becomes slower and deeper, cough and the catarrhal secretion are lessened, and the general condition of the patient is improved.

Recently, I was called upon to prescribe for a chronic bronchitic, who, at intervals, had been under my treatment for a long time. It was because of an acute exacerbation, and I fully anticipated the prolonged fever and excessive cough that always attended upon these acute attacks. I ordered one-thirtieth of a grain of sulphate strychnia with five grains ammonia carbonate four times daily. The following morning I was surprised to find my patient in her usual condition, without fever or additional cough. I believe that I am justified in attributing the result to the strychnia, for the ammonia alone had never produced such an effect. In pulmonary tuberculosis, it is certainly as effective as any other one agent in relieving the night sweats; lessening bronchial secretion; sustaining the over-worked and failing heart, and in improving nutrition.

In conclusion, I wish to say that such results as I believe I have obtained cannot be expected from the usual small doses ordinarily administered. I do not claim for strychnia any wonderful properties, but only such as its proven effects upon respiration, circulation, and digestion, would lead us

to expect. While its administration by myself has not, by any means, always brought the desired results, yet I have found it to be an agent surpassing in influence any other of which I have knowledge.

1335 *Thirtieth Street.*

ART. IV.—**Olive Oil in the Treatment of Cholelithiasis.**

By B. M. ATKINSON, M. D., of Staunton, Va.

The literature on the subject of biliary calculus is rather meagre, and especially so as to the beneficial effects of olive oil as a remedy.

It is with a desire to add my mite to the relief of suffering humanity, and possibly to give assistance to some member of our profession who may meet with a case of that distressing affection, that I am persuaded to speak of my experience and report a case which, after having gone through the list of the usual remedies, was entirely relieved by the use of the oil.

CASE.—Mrs. G. W. H., age 53, the mother of ten children, the youngest 13 years old, a native of Baltimore, and for the last twenty years a resident of this city. Had her first attack of what seemed to be bilious colic in 1880, from which time until 12th August, 1892, she had frequent attacks, at times as often as once a month, but generally at intervals of from three to five months. Often a hypodermic of one-fourth grain of morphine with atropia would be required to give relief from the distressing sense of constriction of the diaphragm and the agonizing pain in the right hypogastrium and the epigastrium. At times hot fomentations and a few doses of a carminative would afford relief.

On the 12th of August, 1892, there set in an attack which continued, with comparatively slight relief, until her final restoration about December 1st, 1892.

A circumstance of interest I should, perhaps, report. About 1st of October, 1892, there were peculiar and marked evidences of nervous disturbance—*e. g.*: One afternoon, as she sat looking out from her chamber window, a horse slipped and fell in the street, which startled her. Instantly she

was seized with a most agonizing attack, which required a hypodermic of a half grain of morphine to relieve.

Again, about 10th of October, 1892, I discovered a tenderness on pressure over the spine about the sixth and eighth dorsal vertebræ, which would send a pain shooting through to the region of the liver. The application of a blister to the spine gave relief of all suffering so completely that she was able to make a visit to Richmond.

On 11th November, she returned home in a pitiable condition, and from that time her suffering was intense and constant except when under the influence of morphia.

Nausea incessant; urine dark, with bile, and thick and loaded with earthy sediment; the eyes and whole surface jaundiced, and there was an utter intolerance of all ingesta.

It now became necessary daily, P. M., to use hypodermics of morphia, from one fourth to three-fourths grain, according to the urgency of the suffering.

It is needless to say that every remedy, at all promising benefit, was resorted to. In my extremity, I was led to try the use of olive oil; being skeptical, however, as to any benefit that could come of its use, and, besides, scarcely hoping that her stomach could retain it.

On the 25th of November, 1892, I gave her six tablespoonfuls of the oil, and, to my great encouragement, she retained most of it, and it soon became apparent that it was more acceptable to her stomach than anything else.

I directed that all dejections be carefully searched through a sifter. The next morning, with beaming countenance, her husband showed me eleven calculi which she had evacuated during the night. The oil was repeated that day with about the same result; and so, from day to day, until sixty-four calculi were collected—varying in weight from $6\frac{1}{2}$ grains to $\frac{3}{16}$ ths of a grain; in size from that of a green garden pea to a large mustard seed, and of every polygonal shape. None were round, but showed that they had been impacted in the gall-bladder, but not cohering.

Straightway then she began to amend; her appetite was restored, and health and strength recovered; and since that time she has enjoyed excellent health.

Before I close, I would enquire, What is the *modus operandi* of olive oil in causing the discharge of biliary calculi? How does it pass from the broader alimentary tract up into the narrow duct in sufficient quantity to act even as a lubri-

cant? In view of the anatomical relation of the parts, one would scarcely look for such a result; but that it does is, to me, established beyond a doubt. I hope that my enquiry will awaken interest in the subject.

Again, biliary calculus being of more frequent occurrence in females than in males, is it a fact that it most frequently occurs in women who have borne many children? *And again*, can the upward pressure of the gravid uterus, by mechanical interruption of the flow of bile from the gall-bladder, give opportunity to the earthy materials of the bile to collect and concrete into stone?

ART. V.—Liquor Sedans; Saw Palmetto; Damiana; Pichi, and Stylosanthes Elatior. Their Uses in Nervous Diseases. Their Medico-Legal Relation.

By JOHN J. CALDWELL, M. D., of Baltimore, Md.,

SPECIALIST DISEASES NERVOUS SYSTEM.

After repeated trials, we have the pleasure of presenting to the profession our experience with the above-named new and valuable specialties.

Like purgative and anodyne remedies, uterine tonics are often found to exert *their* influence on that organ much sooner, and often in a more satisfactory manner when combined, than when given in Galenic prescription. In the compound known as liquor sedans, we have the best mingling of ingredients known to the therapeutic world as especially useful and favorites in affections of the genital organs. They all combine to impart to the mixture the effect so well illustrated in its name of "sedans, or soothing;" and we hope our selection of the following case will not be inapplicable in our endeavor to give the good result of the remedy:

Mrs. F., aged 47, had for eight years suffered with loss of appetite and indigestion, attended with rapid loss of weight and strength. She had been treated by several physicians and had tried various drugs to arrest the waste of flesh, with little or no good result. About a year ago she applied to

me, and I advised her to use the materials of which I afterwards learned through the *Working Bulletin* of Messrs. Parke, Davis & Co., the liquor sedans to be composed. She took these remedies regularly according to my directions, and after two weeks' administration her skin, which had before been dry and husky, became soft and moist, and her complexion of a better color. Her appetite improved, and several articles of diet, which before she could not eat without causing decided uneasiness and diarrhœa, could now be taken with decided relish and good digestion. I continued to use the remedies for several weeks longer, and found her health greatly improved. She gained fifteen pounds in weight, while her spirits were much improved and her energy renewed.

I might mention, also, several cases to show the efficacy of these ingredients in troubles of digestion and nutrition, and how they exert a prompt action in restoring the inertia of the pelvic organs by their tonic effect on the *genital centres*, and in allaying the pathological conditions which we so often find *unduly* exalted to such a degree as probably to have induced the great Sydenham to assert most positively "that all women were hysterical."

The following are the ingredients entering into the liquor sedans—all vegetable, and all, when used, each for itself, capable of effecting, in a less degree, the purpose which the mixture accomplishes in less time and very effectively, showing, as we find on the motto seen on the Waterloo Monument, "*l'Union fait la force*," which is the motto on the shield of Belgium. We have the viburnum or the black haw; the golden seal, whose known amount of *hydrastine* is one of the most reliable alteratives in mucous troubles; and the Jamaica dogwood, or the *piscidia erythrina*, a sedative and anodyne agent of no mean power, besides possessing considerable hypnotic power—sufficient to make it only second to opium, and fully equal, in the experience of the writer, to the action of henbane, so great a favorite in Germany, where opiates are far less frequently prescribed than in this country.

Dr. J. M. Goss, of Georgia, in his "New Remedies," says of the black haw, or the *viburnum prunifolium* :

“It has many properties in common with the *viburnum opulus*, but differs somewhat in many respects also. Both of these plants have the smell of valerianic acid, and undoubtedly contain it. Its most valuable therapeutic use is its preventive power over threatened abortion. For some twenty-five years I have used this article in cases of habitual miscarriage, and have never been disappointed in arresting the unhappy issue when I saw the case in time. It is a matter of general knowledge among farmers and breeders that animals which have dropped their offspring at a certain period are prone to repeat the process at the same period of each future pregnancy; and these farmers use the black haw, given in the form of a strong tea mixed in with the feed, with the view of assisting the mother to go to full term and to prevent the premature ‘slinking’ or dropping of the offspring before its full time; and, *per contra*, it is said, however true I cannot assert, that the rinds given raw of the common Irish potato will conduce to produce abortion in the sow. Another species of haw is the *viburnum santata*, of European origin, and is thought to be analogous in its power to prevent abortion with the *viburnum prunifolium* and the *opulus*. The *viburnum* is a very positive remedy in after pains, and is thought effective in antidoting the abortive action of the root of the *gossypium*, or common cotton root, when taken to produce miscarriage, completely neutralizing the effects of this abortive agent and compelling the would-be criminal mother to carry her offspring to full term.

“As an antispasmodic to the uterus, it removes many of those harrassing nervous symptoms which so often torment, wear down and disqualify the pregnant woman for her final parturient effort. In dysmenorrhœa, I have found no remedy so prompt and kindly acting as *viburnum*. In menorrhagia, it is a very valuable remedy. The *viburnum opulus* has similar effects on the female reproductive organs.”

Dr. Lane says in the *Mississippi Medical Monthly*, speaking of the two *viburnums*: “Their action is supposed to be somewhat similar, with a specific influence upon the uterus; a nervine, antispasmodic, diuretic, astringent and tonic.”

In dysmenorrhœa, either congestive or spasmodic, its action should be very satisfactory, affording that relief which, to our shame, we have in very many instances failed to secure with other and older agents. I believe it to be a direct

uterine tonic and pelvic anodyne, and that the uterus, when in an atonic condition, is as susceptible of tonic influence as any other organ; and knowing that most of our therapeutic agents are of but little value in the majority of uterine ailments, I accept, with pleasure, any remedy which is known to give good results and to supply a want long felt in treating female troubles.

I can, from my own experience in its action, safely recommend the compound to the profession at large, as I have not been disappointed in securing the desired results. I believe it is destined to produce a new era in gynæcology.

In irregular, painful, suppressed and in excessive menstruation, it is almost a specific. In uterine or in ovarian neuralgia, in displacements of the uterus, which give physicians so much trouble and patients so much suffering, this remedy will act like a thing of magic; and when the profession shall have become fully impressed, as it will the more we use it, with its remedial virtues, we believe that we shall hear much less of the many operations in gynæcology, and find, no doubt, that in the end the present fad of cutting and slashing at the cervix could have been well dispensed with in favor of more conservative therapeutic procedures.

We venture to surmise that the pregnant woman would derive great comfort as an antinauseant from half doses of the liquor sedans—with or without one drop of Fowler's solution, three times a day or oftener, as might be required. The writer remembers the case of a lady from a neighboring State who was nauseated the week after marriage until the day her babe was born. Nothing afforded satisfactory relief except champagne, which was objectionable for many reasons, but which had to be kept up. *Now*, he would combine with the liquor sedans a drop of Fowler's solution, or a drop of beechwood creosote, with or without a tablespoonful of lime water, expecting, with very fair prospect of success, to afford relief to the tortured woman.

Should the stomach reject all remedies, the mixture in

question could be given in free doses by enema, in either milk or in some form of broth, where there is danger of too great prostration from the continued nausea or the protracted loss of appetite.

In cases of imperfect erectile power, or impotency, it appears to exert a desirable tonic influence, like other restorative remedies acting on the same organs. Of equal merit, might be here cited, such remedies as the fluid extract of *pichi* (*fabiana imbricata*), from Chili; the fluid extract of *damiana*; the *saw palmetto*; the *yerba santa*; the extract of the *vanilla bean*; and last, but not least to be depended on in such cases, the *stylosanthes elatior*, which has lately acquired the reputation for a valuable uterine sedative during pregnancy, and a good permanent tonic to give strength to the muscles of the womb during the process of labor, and also for causing firm involution after that process.

All these agents make up the important rôle in the successful treatment of the genital organs of both sexes.

Thus we find, from our own, as well as from the experience of other medical men, the natural similitude of the therapeutic action of the similar drugs on kindred organs; and though agents which are supposed to exert their *special* action have been alone circumscribed to female affections in formulating prescriptions directed to their troubles, it is a matter of wonder why the attention of the profession is not directed to the line of action in which we wish to secure the convalescence of our patients, and convince themselves that, as a remedy, "what is sauce for the goose should also serve as sauce for the gander."

"*Medical Jurisprudence.*"*—How very important the foregoing suggestions are from a medico-legal standpoint, may be seen when we reflect upon the sad mental troubles frequently accompanying the various phases of genito-urinary disorders, viz: Diseases of the brain and nervous system, mental prostration, emotional insanity, alienation—tempo-

* Advanced Sheets. Dr. Caldwell's coming book on "Nervous Diseases."

rary or permanent, hysteria, hypochondriasis; indeed, all kinds of eccentricities may be found often playing some fearful antics in criminology. Or, in the language of that original and fearless genius and eminent gynæcologist, Lawson Tait, F. R. C. S., Surgeon-in-Charge of the Birmingham Hospital for Women :

"At the period of the appearance of menstruation, and at its decadence, special dangers await women—all of them due to their sexual functions, though some of them have only an indirect association with the pelvic organs. Thus, on the accession of those feelings of vague uneasiness or positive pain, to which the name *molimena* has been given, we frequently find instances in which a dormant tendency to mental disease becomes aroused into action; and acute mania forms one of the risks through which young women have to pass at the period of puberty. In these diseases, the greatest distress is sometimes caused by the terrible form taken by the insanity—erotomania; and I have several times seen girls so affected indulge in gestures and language which puzzled us to guess how the patients became acquainted with them, the girls were so young and had been so well brought up."

As soon as any symptoms of sexual eccentricity display themselves in a girl at the molimenal period, she must be treated as insane; and I hold that this view is really the best and safest explanation of many cases of what look like mere lust, and what is usually and unfortunately punished as a moral offence.

It must be borne in mind, as I have already said, that in the descent of the whole scheme of creation, the function of reproduction has been the field of the keenest and most unrelenting struggle for existence; and at the time of the physiological change which enables the young animal to enter upon that dangerous battle-field, the tendency of his or her ancestry is almost sure to evince itself in one form or another; and any error in this direction is to be held as not the fault of the individual, but his or her misfortune. The true preventive consists in what I believe to be the duty of every parent to give to every child—instruction in the nature and purport of sexual functions, how they are to

be used, and how easily they may be *abused*. If this were done, we should not only diminish sexual diseases, but we should greatly diminish sexual immoralities.

At the climacteric period of life, women are subjected to another set of risks, some of which are directly, and others only indirectly associated with their sexual functioning organs.

The general symptoms of climacteria are often severe enough to constitute a disease, even though they may have only a subjective existence.

Most women cease to menstruate between the ages of forty-five and forty-eight, though they may have the change earlier as a result of certain conditions elsewhere described, or it may be delayed for some years by causes of an opposite nature. The general symptoms which accompany the change include headache, nervous depression, flushes of heat and chill, irregular and sometimes profuse menstruation, pains in the back, dyspepsia, or other functional disturbances. Very few women pass the climacteric period without more or less suffering, and in some cases permanent damage is encountered. The nervous symptoms may be so severe as to result in mental derangement, and this often takes the form of incurable dementia. I have also noticed in several cases a specific form of climacteric epileptic mania, which I believe to be entirely irremediable.

But perhaps the most common, and I really think the most terrible form of mental disease which is developed at the climacteric, is a tendency to the abuse of alcohol. Here let me say, in defence of woman, and in opposition to much clap-trap which it has been of late the fashion to write about their drinking, that after a considerable experience of women who have given themselves up to the habit of intemperance, I have never yet had one as a patient in whom there was not some strong inducement to the indulgence. Women are always secret drinkers, in this differing greatly from men; for when a woman does give way to intemperance, she knows how much more she has to lose than a man has, and how much more misery she will bring on others.

The cause will generally be found to exist in some physical suffering, or in some mental distress, from which she seeks relief, or in a form of climacteric insanity. I have cured a drunken woman of her habit by a pessary for retroflexion. I have known many driven to the use of an alcohol anæsthetic by the neglect or infidelity of their husbands; but by far the larger number of these unfortunates have adopted the habit late in life as a relief from their climacteric discomfort.

These are cases of insanity, and it would be a wise law which would enable us to place them in seclusion till the time of their trial is over. I do not believe that women ever take to drink from the mere love of it, or from convivial indulgence, as men do.

When the inner secrets of the mind of a climacteric patient, suffering from such depression as is likely to produce intemperance, can be reached, some delusion will generally be discovered which will guide us in the treatment.

I cannot here enter into this subject without trenching on the province of the alienist, but I could give many illustrations of it. I have found women believing themselves pregnant by men not their husbands; but one of the most terrible was a case in which the poor woman believed that she was pregnant by a dog. We removed her from all home association without putting her under restraint, carefully regulated her mental occupation, and in twelve months her delusion left, and she gave up her intemperate habits completely.

The most essential treatment in all these cases is removal from all the former associations of the patient.

IN CONCLUSION.—Thus it may be noted that in this presentment is to be found a description of the sad trouble often attending the approach of puberty, the molimena, the season of reproduction, its decline and climacteric, a fearful combat wherein vast holocaust have faded away through fearful tortures finally down to oblivion in former decades with but little amelioration—believing, like the martyrs of

old, that these trials and pains were necessary for the propitiation of original sin.

The light of science (the handmaid of religion), during the later decade, has so greatly illuminated religion and medicine that the dawn of truth and harmony point happily to the millennium.

Modern surgery, improved therapy and sanitation, have done more for humanity than the two thousand previous years. So that now the battle-field of regeneration and the fiat, "Thou shalt bring forth in tribulation," is vastly ameliorated, and our noble profession may proudly go forth free from the stigma of *experimentia doctet*, or guess-work and doubt.

ART. VI.—The Necessity of Prompt Treatment of Tumors of the Breast.

By H. R. COSTON, M. D., of Fayetteville, Tenn.

The frequency with which one meets cases of cancer of the breast in its various forms is ample excuse for occasionally calling attention to its relief. During the last few months two cases have fallen under my observation which strikingly illustrate the necessity of more care on the part of physicians in dealing with cases of "tumors in the breast."

A tumor situated anywhere in this gland should always be looked upon with suspicion. However small it may be, it does not relieve doubt of its malignancy. Although not larger than a split pea, it may be the beginning of a slow and painful death if not promptly and vigorously treated.

Carcinoma is regarded by most authorities at the present day as primarily a local disease. Remembering that 90 per cent. of all tumors of the breast are malignant, how imperative it is that the family physician be prepared to give the family and patient the proper advice.

Let us see what a few of the recognized authorities on this subject have to say in regard to the treatment of such cases.

Treves (Operative Surgery) says only 5 per cent. die of the operation.

Gerster says the large number of relapses and high death-rate are due to the tardiness of the family physician in advising operation, and the failure of the patient to heed the advice.

His mortality has only been 3 per cent. after operations for the removal of the breast (*Aseptic and Antiseptic Surgery*.)

Again, hear this: "The greatest physical evil which can befall a human being is to become infected with malignant disease. * * * The rule should be held imperative that all cases which, after a short trial of remedies, still remains doubtful, should at once be subjected to the knife."—(Holmes' *System Surgery*, Vol. III., page 709.)

A tumor of the breast occurring after the thirtieth year in either sex, should be excised as soon as discovered.

Gross had a mortality of only 3.7 per cent. of all cases operated, although he often removed large portions of the pectoralis major muscle along with the gland. He has an absolute cure in 21 per cent. of *all* cases.—*Am. Sys. Sur.*, Vol. II., page 319.

The treatment of cancer can only be undertaken by the surgeon since, up to the present time, all the specifics introduced, either by regular practitioners or by charlatans, have proved quite inefficient, if not harmful.—Quain *Dic. of Med.*, page 204.

Thomas Bryant, of London, has a mortality of only 6.7 per cent., and only 3 per cent. of the whole were attributable to the operation.—(*Surgery*, page 778.)

J. D. Bryant says 9 per cent. never have a recurrence, and an average of one year is added to the life of cases in which there is a recurrence.—*Oper. Surg*, page 480.

The above are sufficient quotations to show what the present opinions of men, whose ability cannot be questioned, are. And they also show what the prognosis is, both as regards the immediate effect and the prognosis as regards a return of the disease. I could go on citing authors *ad in-*

finitum, but it is useless. With the present lights before us, no one should hesitate, when a case of tumor of the breast is presented to him, to immediately recommend its removal.

But there are many who, notwithstanding all this, hold up their hands in holy horror and say: "Keep your hands off that lump." A case in point I have now under observation.

Mrs. W., æt. 34, came to me two years ago with tumors the size of a hen's egg in each breast. I immediately recommended their removal, together with the axillary glands, which were then becoming enlarged. The woman was willing and anxious for an operation, but the husband objected, and said they would go home and "write" me about it. That was the last I heard of the case, until a few weeks ago I was asked to see her, when the case was simply hopeless from extension and systemic infection. It then developed that the family physician had urged them to have nothing done.

A second case just similar has just died and left a household of little children to be reared motherless.

Now, in such cases, what a responsibility the family physician takes upon himself when he says: "Have nothing done to that tumor." Take the first case; two years and more have elapsed since the woman first presented herself for operation. It was then, without doubt, a local disease, and thorough removal would have freed her from the disease, and saved her a slow, painful death. We all know that it is *always* a fatal disease without operation; and even should only 9 per cent. have a perfect recovery, it is just nine out of every hundred cases saved from a most loathsome disease and slow and exceedingly painful death. But it is unfair to make 9 per cent. the standard, for there are those who have a perfect result—namely, never a recurrence—in 21 per cent. of all their cases.—(Gross, *loc. cit.*) In the event that the disease should recur, we have shortened the stage of ulceration by so much time as may elapse between the operation and its recurrence. Even this is a great gain, as it relieves the mind for a certain length of time and saves the patient and friends much mental worry.

Should the tumor be one of benign nature, no harm would be done the woman, and she would be saved the risk of its degenerating into one malignant in nature.

To sum up, we may say: *Every* tumor developing in the breast in either sex, at whatever age, should be at once extirpated and the glands of the axilla removed with the breast and pectoralis major in cases of extended disease.

The *facts* should be set before the patient in a truthful manner, neither exaggerating the hope of an absolute cure or the immediate dangers of the operation. And, if I may be allowed to digress, this should be the rule in all cases of whatever nature. I have known a man recommend (?) a woman to have a simple ovarian tumor removed, at the same time telling her that nine chances out of ten she would die! The truth was, he did not feel competent to operate, but was unwilling for the case to pass out of his hands. Such advice has carried many a patient to her grave, and is (and should be regarded by the law) criminal.

ART. VII.—Some Remarks on Excision of the Membrana Tympani and Ossicles *

By S. McCUEN SMITH, M. D., of Philadelphia, Pa.

LECTURER ON OTOTOLOGY AND CHIEF OF AURAL CLINIC IN JEFFERSON MEDICAL COLLEGE OF PHILADELPHIA; SURGEON IN CHARGE OF THE EAR, THROAT, AND NOSE DEPARTMENT OF THE GERMANTOWN HOSPITAL.

The subject of excision of the membrana tympani and ossicles, for the relief of dangerous pathological conditions of the auditory apparatus, and with the expectation, in many cases, of producing an improvement in the hearing power, is at present attracting more attention, and exciting more universal thought and investigation, than any other part of otological science. There are, moreover, good and sufficient reasons for this manifest interest. When we call to mind the multitude of suffering humanity, who have for

* Read before the Philadelphia County Medical Society, November 7th, 1893.

years endured the affliction of partial or total deafness, of distressing tinnitus, of incurable vertigo, and of many times serious and even fatal complications arising from aural disease, we cannot wonder that any new method advanced for the relief or cure of these conditions should elicit such general and serious attention.

Almost every notable advance in either medicine or surgery has for a longer or shorter period met with vigorous protests, and the profession is usually the recipient of so many questionable reports from the hands of various men, as to make us naturally slow to accept or adopt any advancement unless characterized by so great a degree of conservatism, that the conservatism alone almost deprives the subject of all its usefulness. This has unfortunately been especially true of the ear and its diseases, and if the advocates of this branch of medicine wish to push it to the front, and thereby keep pace with the rapid strides that the other *special* branches of medical science are making—notably ophthalmology, laryngology, gynaecology, and brain and abdominal surgery—we must, to a greater or less extent, recognize any apparently rational advancement, until by careful and thorough investigation we prove the theory thus advanced to be wholly unreliable, and therefore not capable of producing good practical results.

We are constantly receiving medical journals in which are presented long and sometimes faulty articles on the so-called "Ossicle Operation." Many of the statements given, and the results expressed, seem to be based on the experience of only a few cases. One writer bases his remarkable production, and its still more remarkable conclusions, on the special knowledge obtained from his experience with a *single* case, which, however, he has the goodness to inform us, "resulted in a fatal termination, much to his surprise and sorrow;" but as the history of his case plainly indicates the very serious complication of a brain and mastoid abscess, (which was subsequently verified by post-mortem examination) the fatal termination was not other than might have

been expected as a possible result of unskilful and untimely interference.

Our experience with this operation, (and we can present many cases to show practical results) prompts us to advise and teach that in *properly selected* cases, excision of the membrana tympani and extraction of the malleus and incus, (one or all, as the conditions in each individual case may indicate) is not only a proper and rational procedure, but is positively demanded as the only procedure left to us from which we can hope for the relief or cure of many distressing cases. To my mind there is but a single element of uncertainty in the prognosis of this operation, which naturally leads us to the inquiry: "In what class of cases may we reasonably expect good results, especially as regards hearing-power?" This is indeed an all-important question, and one which, moreover, presents many difficulties in its solution. Time and a wider experience will doubtless solve the problem. Meanwhile, every observer should place on record all the facts in his possession, so that comparisons and deductions may be made. There is one suggestion, however, that we desire to emphasize, and that is this: In each and every case we should make a *prolonged and personal effort* to relieve the diseased conditions present before advising or resorting to so important an operative procedure as excision, unless, of course, the case is so urgent as to require immediate action. Our views on this part of the subject will be more fully expressed in the concluding portion of this paper.

In order to practically illustrate the results obtained in some interesting cases that had persistently resisted every other form of treatment, we will briefly relate the history of several patients who have kindly consented to present themselves for your inspection this evening.

CASE 1—Is that of Mrs. H. M. K., aged forty-nine years, who consulted me at the suggestion of Dr. M. B. Walter, of Harrisburg, Pa. Fourteen years ago, without any apparent cause, she suffered from severe *pain* and deafness in left ear, which was followed, in about forty-eight hours, by a profuse *discharge*. This discharge continued for a few weeks, then

ceased, only to re-appear within one or two months. These intermittent attacks were persistent. It was, therefore, at an interval of about every two months, during a period of fourteen years, that this patient suffered attacks of severe pain, followed by a discharging ear, which generally lasted for two or three weeks. On July 16, 1891, we excised the carious malleus and incus, and with the curette removed all pathological products from the tympanic cavity. From the date of operation up to the present time, (covering a period of over two years) the patient has been absolutely free from pain and discharge, and can hear ordinary conversation at about ten feet.

CASE 2.—The next patient, L. T., aged sixteen, has been in very poor health for some six years past. The history is very similar to that of the preceding case, except that the diseased condition has extended over a period of four years, the *abscess* occurring six or seven times during this period. I wish to call attention to the fact that both of these patients had more or less severe *pain* almost continuously. On June 23, 1893, we excised the carious malleus and incus, and curetted the tympanic cavity; since which time pain and discharge have entirely ceased. The hearing-power has risen to about two-thirds normal, and the general health is very much improved.

CASE 3.—Mrs. K. B., aged forty-one. This case is most interesting, from the fact that the pain she suffered for eight years was almost beyond endurance. Her ear disease, however, dates from early childhood. For the past eight years she has suffered (about once a week) from most severe attacks of *pain*, lasting several hours, which would be somewhat relieved after a copious *discharge of pus*. On September 17, 1893, we removed the carious malleus and incus, and carefully curetted the tympanic cavity; since which time pain and discharge have ceased, and the hearing-power has increased to about one-half of normal.

CASE 4.—The next patient is E. J., aged fifty-four, who has been gradually growing deaf for twenty-five years. *Has never had either pain or discharge. Totally deaf* in right ear for at least ten years. Excised malleus on September 26, 1893. Now hears ordinary conversation at three feet. Membrana tympani re-formed eight days after operation. The recent date of operation does not permit us to make any further comment upon the results in this case.

CASE 5.—The next case is Miss K., who was operated on by Dr. Laurence Turnbull on February 6, 1891; the writer

assisting. Left ear had been growing deaf for twenty-one years, and she claims to have been totally deaf in left ear for eight years previous to operation. *Never had pain or discharge.* On the above date the malleus was removed; since which time (now more than two years) she has been able to hear ordinary conversation at about five feet.

The five cases, just cited, forcibly illustrate what has been done in two markedly dissimilar classes of aural disease, both of which must be regarded as of the highest importance. The patients themselves are here for your inspection. A personal examination will undoubtedly show the results better than any description I could give. I desire to present, further, some fourteen additional patients who have been operated upon by me at various times. As the detailed histories of these cases would be tedious, and are not unlike those already related, they will be omitted.

In closing, we may add that our experience in this procedure now covers a total of over 200 cases operated upon. A large number of these cases have been placed on record from time to time, and the remainder will be tabulated for publication at an early date. The following conclusions, which we deduced from the results of over 150 operations, and presented before the Otological Section of the American Medical Association, so fully express our present views on this important subject that we shall venture to quote them in full:-

1. Never promise positive results from an operation on the ear, for the relief of tinnitus, pain, suppuration, and vertigo. This promise will often be exacted, but the present status of such surgical procedures is not sufficiently defined to warrant us in promising the results which we may hope to attain.

2. Probably no operation in the entire range of surgery (if carefully performed) is attended with so little disturbance, either local or constitutional, as excision of the membrana tympani, malleus, and incus, when not complicated with necrosis of the tympanum; in fact, there are very few measures of relief applied to diseased conditions of the hu-

man economy that are so prone to be productive of good results as is excision of the membrana tympani and ossicles in certain ear-diseases.

3. Tinnitus, vertigo, impairment of hearing, and pain, are almost certain to be relieved by the removal of the drum and ossicles, if not dependent upon some structural changes in the internal ear.

4. The longer the middle-ear disease has existed (as characterized by tinnitus, progressive loss of hearing, pain usually not well-defined, and possibly vertigo), the greater is the danger of some serious structural lesion of the internal ear, and, therefore, the less hope of materially improving the hearing-power; and yet, even in extreme cases, the tinnitus, vertigo, and pain, are more or less benefitted, sometimes markedly so.

5. If, after due and proper efforts to relieve progressive aural disease, you do not produce a speedy and marked improvement, no time should be lost in performing the radical operation, as by delay an internal ear-complication may have become established, and this always makes probable benefit more doubtful.

6. It is not well to express too much hope that the operation will materially improve *hearing* in long-standing, *non-suppurative* cases; and yet, when the chances are so much in favor of its producing entire freedom from tinnitus and vertigo, and especially since there are such great probabilities of a rapidly-progressing disease becoming arrested from the date of operation, it would indeed seem unfortunate if such patients were not offered the benefit of the doubt, if such it can be termed.

7. In all cases where the membrana tympani is thickened, markedly retracted, and made firmly adherent by old inflammatory products to the tympanic walls, and where, in this same connection, you find the ossicles completely ankylosed, the function of these parts, under such circumstances, is of course entirely suspended; therefore, in consequence of this condition, this part of the conducting appa-

ratus can be regarded only as a foreign body, and, as such, the only rational hope for relief is through removal, which will, in the majority of cases, relieve tinnitus and vertigo, while, at the same time, improvement in hearing can reasonably be expected on account of the opening thus formed admitting the sound-wave which impinges directly on the stapes and fenestra rotunda.

8. As a preventive of necrosis of the temporal bone, mastoid abscess, aural polypi, and serious brain complications (when the result of chronic aural discharge), the *suppurating* ear should *not* be allowed to continue and thus become chronic. If, therefore, under the usual methods of treatment, the discharge does not permanently yield, it is certainly good and, I might say, imperative surgery, to promptly extract all fragments of the membrana tympani and necrotic ossicles, for in so doing you have taken the only rational step to produce a cure of this always dangerous discharge, by first removing all foreign matter, and thereby establishing a free drainage, and, furthermore, giving an opportunity of properly treating a diseased cavity that otherwise would be inaccessible; and inasmuch as the writer has not met with any failures in this class of cases (when unaccompanied by extensive necrosis of the tympanic cavity), he is forced to express the belief that *timely surgical interference* cannot be too strongly urged, for by so doing you eradicate the primary disease, and thus prevent those always serious, and oftentimes fatal complications.

1502 Walnut Street.

ART. VIII.—The Treatment of Syphilis.

By T. M. BAIRD, M. D., of Hot Springs, Ark.

The treatment of syphilis includes every means in our power to eliminate the syphilitic virus from the system; we are engaged in a fight when treating this disease, and can only hope to prevent the enemy from making headway while we are starving him out; we must destroy the round

infective cells of syphilis before they have had time to cause structural changes in the tissues, but should one escape, remember, it will act as a focus from which others will be generated.

How are we to eradicate this poison from the system? Not by pursuing a course of mercury and potash alone, but by giving these "sheet anchors," and by directing the patient to take regular and systematic exercise in the open air, to eat an abundance of wholesome, plainly cooked and digestible food, to wear warm clothing, and to take a hot bath at least once in three days, that the skin may be kept in a healthy condition and be able to throw off deleterious matter that would ordinarily have been retained in the system.

Over-work should never be allowed, and eight hours sleep should be had in the twenty-four. Tobacco and stimulants of all kinds are contra-indicated, and should be avoided.

We should not begin syphilitic treatment, even if we are certain that the patient has syphilis, until the eruptive stage. It has been clearly demonstrated that the disease cannot be aborted by any means known to us at this time, and if allowed to progress uninterrupted until this stage, it seems more amenable to treatment, and late manifestations are not so prominent.

After the eruptive stage (erythema) has made its appearance, large doses of mercury should be given. The patient can tolerate much larger doses before tissue changes take place than afterwards, especially if hot baths are indulged in, and the system kept in a good, healthy condition.

If the patient is cachectic, of a naturally weak constitution, or has been debilitated by the disease, it will be necessary to give tonics, that the system may take on renewed vigor, assist in eradicating the poison, and be able to undergo vigorous treatment.

The sulphate of iron, combined with phosphorus, quinine and nux vomica, in the pill form, will make a good tonic, but the following formula I prefer to the pills:

R Acid phosphoric. dil..... $\bar{5}$ v
 Tinct. nucis vomicæ..... $\bar{5}$ iiss
 Elixir chlorides co. (R. & H.) q. s. ad. $\bar{5}$ iv

M.—Sig. One teaspoonful in water, before each meal.

Another formula I have used with success, when there is much depression, is:

R Strychniæ sulph.....gr j
 Vin. cocæ..... $\bar{5}$ vj

M.—Sig. One dessertspoonful before each meal.

When the patient begins to respond to this treatment, begin the constitutional treatment again.

That any one preparation of mercury is better than another, in the treatment of this affection, can hardly be said, for sometimes one preparation cannot be borne at all, while another will cause no ill effects at all. When all preparations of mercury seem to disagree with a patient, the hypodermic method should be given a trial, and I think you will find that can be borne nicely.

In Hot Springs, where hot or vapor baths are given daily, the mercurial ointment is given by inunction, in preference to all other preparations, but is not used to any extent elsewhere. The bin-iodide, proto-iodide, and bi-chloride I prefer for internal medication. One of these preparations should be given three times a day until its effects are noticed, when it should be discontinued for a few days, before commencing again. Continue the mercury for four months, also give tonics when indicated (in some cases it is better to give tonics whether there seems to be any indication for one or not). After four months of this treatment the symptoms should have abated considerably, and the treatment may be discontinued entirely for two weeks, after which, a two months' course of mercury in smaller doses should be commenced. After the patient has been subjected to a mercurial treatment for six months, the "mixed treatment" should be begun; the following formula is a good one for this mode of treatment:

R Hydrarg. chlor. corros.....gr.ijj
 Ammon. vel sodii chlor..... $\tilde{5}$ iss
 Kalii iodid..... $\tilde{5}$ j- $\tilde{5}$ iss
 Elixir chlorides co., (R. & H.).... $\tilde{5}$ vj

M.—Sig. One teaspoonful, in water, after each meal.

This bottle will last for sixteen days, and an interval of one week should elapse before again taking. Continue this manner of treatment for six months,—which will make one year that the patient has taken treatment—at which point it is a good idea, if there are no bad symptoms, to allow a rest of several weeks before taking up the following:

R Hydrarg. chlor. corros.....gr.j
 Kali iodid..... $\tilde{5}$ vj- $\tilde{5}$ j
 Tinct. gent. co..... $\tilde{5}$ ij
 Succus alterans..... q. s. ad..... $\tilde{5}$ vj

M.—Sig. One teaspoonful, in water, after each meal.

The efficacy of the iodide of potassium is increased by combining it with the bi-chloride of mercury; besides, the mercury exerts a beneficial effect on syphilis in any stage, except when a gumma is present. Continue this prescription for one year, with intermissions of a few days every month. The patient should by this time have taken enough medicine to effect a cure, but should not be told so until all treatment has been discarded for one year. No symptoms appearing in that time, we can safely tell the patient he may marry, if he should so desire.

This line of treatment applies to cases which run a regular course, which the great majority do. There is no distinct line between secondary and tertiary syphilis, and I do not think, in cases where tertiary symptoms have not made their appearance, that we should discontinue the use of mercury entirely, for if it is given properly there is no reason why we cannot continue its use for two years. If a case presents itself suffering from tertiary lesions, give iodide of potassium, in daily increasing doses, until iodism is produced, and at the same time give minute doses of mercury; then it will be necessary to lessen the dose, only to increase it again when you will find that a degree of

tolerance has been established, and the patient can take a much larger dose than he could at first.

Syphilis is a self-limited disease, and cannot be cured before the poison has worn itself out, which it generally does in two years, under intelligent treatment. The mercury and potash do not cure the disease, but keep it in check while we endeavor to rid the system of it. At Hot Springs, where the thermal baths are taken as an auxiliary to the other treatment, the disease can be eradicated sooner than at other places, because the waters hasten the elimination of the syphilitic virus, and cause nutritive tissue changes to take place more rapidly.

Clinical Reports.

Enterectomy—End to End Anastomosis—Cholecystenterostomy with Murphy Button.*

By **W. B. ROGERS, M. D.**, of Memphis, Tenn.,

PROFESSOR OF PRINCIPLES AND PRACTICE OF SURGERY AND CLINICAL SURGERY AT MEMPHIS HOSPITAL MEDICAL COLLEGE; CONSULTING AND VISITING SURGEON AT ST. JOSEPH'S HOSPITAL; CHIEF SURGEON TO K. C., M. & B. R. R., AND TO Y. & MISS. V. R. R.

CASE I.—*Resection of Small Intestine for Gangrene—End to End Anastomosis with Murphy Button.*

October 12th, 1893, Robert Hannon, male, 20 years of age, jumped from a wagon to the ground. The jar caused the descent of a right inguinal hernia, to which he had been subject for several years. He had theretofore been able to reduce the hernia, whenever it appeared, without the aid of a physician. On this occasion, however, he failed, and called his physician, who, without the aid of an anæsthetic, and very little effort by taxis, succeeded in pressing the hernia apparently back into the abdomen.

The patient, however, continued to complain of pain extending from the inguinal canal towards the umbilicus. There was a slight fullness or induration at the site of the internal ring, but apparently within the abdominal cavity.

* Read before the Southern Surgical and Gynæcological Association, New Orleans, November 15th, 1893.

The patient's general condition was nearly normal. During the next two days calomel, salts and oil failed to act on the bowels. So, also, did repeated enemata of large quantities of water fail to bring away faecal matter. The abdomen was gradually becoming distended and tympanitic.

When I saw him two days after the occurrence of the hernia, I found his belly greatly swollen, tympanitic, with marked tenderness from the umbilicus down to the inguinal canal on the right side. He was vomiting a dirty greenish-looking fluid with distinctly faecal odor. Pulse and temperature about normal. I invaginated the scrotum with my finger, carrying it well up into the inguinal canal, but was unable to feel the hernia there, though just above Poupart's ligament, and just under the internal ring, there remained a small induration, indistinctly felt by reason of distension of the abdomen. The conclusion was that the hernia had either been reduced in its sac, or else that both had been well pressed up the inguinal canal, and between the peritoneum and wall proper. An operation was at once decided upon.

An incision three inches long was made over the site of the appendix. At least a pint of blood-stained water escaped from the peritoneal cavity. Inserting my two fingers, I detected a constriction at the internal ring, and succeeded in drawing out eight inches of intestines. This I brought through the abdominal wound to the outer surface of the abdomen. It was so congested that at each end of the eight inches, where the encircling band had constricted it, the peritoneum had given away and gangrene was imminent. I immediately cut out ten inches of intestine, and made an end to end approximation by means of Murphy's button. All hæmorrhage was arrested, the abdomen cleansed, and drainage tube so placed as to reach the bottom of the pelvis. The wound was closed with silk suture; the patient taken off the table with a pulse of 80. The reaction that night was pronounced, temperature reaching 103° , but fell promptly by morning to 99.5° . His pulse from that time on did not go above 86, and his temperature ranged under 100° .

Fifteen grains of calomel were given the night after the operation; ten grains were repeated the next day, and by means of oft-repeated large enemas the intestinal canal was thoroughly emptied of all gas and faecal matter at the end of sixty hours. The patient's general condition was good all of the time after the operation, and he expressed himself ready at any time to get out of bed and go to work. Thirty-two days

have now elapsed and his bowels are acting every day without medicine. His appetite is good, and he is eating ordinary food. The drainage tube was removed on the third day. The button was passed at the end of the seventh day.

(The patient was then presented for examination by the Fellows of the Association.)

CASE II.—*Distended Gall Bladder—Cholecystenterostomy by Murphy's Button.*

Captain Elliott; 53 years of age; of sedentary habits, had suffered more or less with dyspepsia for years. Six months before, he became very much jaundiced. The liver was greatly enlarged; he had no fever; pulse feeble at 60 beats per minute; was emaciated to almost the last degree. There was great pain over the pyloric region, with tenderness all along the liver, which projected in a uniform line three inches and a half below the border of the ribs. At the anterior axillary line there was a distinct projection downwards from the liver, reaching the anterior superior spinous process of the ilium.

The case had been diagnosed by several physicians as cancer of the liver. While the symptoms pointed strongly to such a condition, I was not willing to consent to the diagnosis without an operation—this growth had been so *rapid*; had *overreached* the rapidity of growth so characteristic of malignancy. I detected what I thought to be the rounded end of the gall bladder projecting at the lowest point of the enlarged liver.

An incision was made two and a half inches below the anterior extremity of the ninth rib, extending downwards three inches. Upon entering the abdomen I found the liver greatly enlarged, very much congested; it was blue, but its surfaces were smooth; and projecting at its lowest point was the gall bladder. I succeeded in bringing the fundus of the gall bladder in the incision, and opening it, evacuated fourteen ounces of bile. With a probe introduced into the gall bladder, and my two fingers in the abdominal cavity, I was enabled to follow the cystic to the common duct, but no further. I examined with my two fingers the under surfaces of the liver, and found no signs of malignant disease. I tested the common duct to the duodenum, and could find neither gall stone or malignant growth, but the liver was so swollen that a stone in the common duct might easily have escaped touch.

The condition of the patient at this time admonished a

rapid completion of the operation, so that I did not attempt a cholecystenterostomy, but sutured the gall bladder to the anterior wall of the abdomen, hoping that under the use of liberal douches of hot water I might succeed in clearing out the common duct. The patient reacted slowly after the operation, but in a few days was out of all danger. The hot water douching was tried, and every effort made to pass a probe along the common duct without success.

At the end of three weeks he had gained some in strength, his appetite was good, and his color had nearly resumed the natural. The liver had receded beneath the ribs. In this state I allowed him to return to his home to recuperate before I operated for cholecystenterostomy.

Second Operation.—Patient returned after three weeks with general condition very little improved, but the absence of bile from his bowel seemed to have prevented his gaining in flesh. The prospect of improvement in the absence of bile was so unpromising, that although his condition was bad, in consultation it was deemed advisable to connect the gall bladder and the bowel. At the time of this operation, I again explored the track of the common duct and felt two distinct enlargements, believed to be calculi. The case was not one to waste time in efforts at removal of calculi from the common duct; so I hastily did the cholecystenterostomy and used the Murphy button.

The case progressed favorably, the button coming away from the fistula in the abdomen on the seventh day. We had much trouble in keeping the food from escaping *via* the gall bladder. Most of the bile passed into the bowel. His condition for ten days was precarious indeed, but he slowly improved, and he went to his home at the end of four weeks. There he gained about fifteen pounds in flesh and was slowly but steadily improving until three months after the operation, when he was taken with diarrhœa, soon becoming dysenteric, and he died on the third day.

The operation, however, of gastro-enterostomy with the Murphy button proved entirely satisfactory, and so far as an operation was concerned is to be regarded as a success in the case.

Case of Plastic Operation for the Repair of the Outer Canthus.

By W. H. BATES, M. D., New York, N. Y.

ASSISTANT SURGEON NEW YORK EYE INFIRMARY.

The case is interesting, because there were a number of unexpected results obtained which were desirable. The sliding-flap was used, and while its traction secured an acute angle at the outer canthus, the lower lid was shortened, and the outer corner was drawn away from the globe.

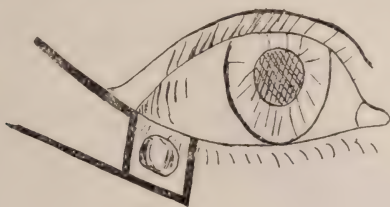


FIG. 1.

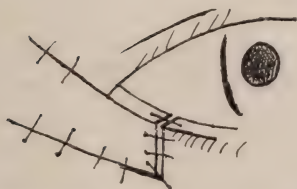


FIG. 2.

Mrs. B., aged fifty, came to the New York Eye Infirmary early in June, 1890; service of Dr. H. D. Noyes. She had an epithelioma at the outer fourth of the right lower lid.

June 30. Operation; ether (see Fig. 1.) The involved skin and one-eighth of an inch beyond was excised. The incisions were extended through the cartilage and conjunctiva of the lid and the parts removed, leaving a space more than a quarter of an inch square at the outer corner of the eye. The hæmorrhage was slight, and was readily controlled by hot water.

The second step in the operation was the preparation of the flap. The lower horizontal incision was continued backward toward the ear for about an inch. The upper incision was continuous with the margin of the lower lid, and extended more upwards. The two incisions were made to diverge posteriorly. The flap was separated from the underlying tissue. The skin back of it was undermined.

The third step in the operation was the adjustment of the flap. The flap was drawn forward, and a suture through the centre of the edge and opposing skin of the lower lid was tied. The upper edge of the skin flap was made continuous with the free border of the lower lid, and held in place by a suture. The manner of introducing this suture was important (see Fig. 2) It was passed through the centre of the border of the lid and the edge of the skin flap, and when tied there was no gaping externally or at the conjunctival surface. Other sutures were used to hold the



FIG. 3.

flap in position. The inner surface of the skin flap was continuous with the inner surface of the lower lid. No sutures of the conjunctiva were made. Bichloride wet

dressing. Bandage. The patient returned to her home the same day, after recovering from the effects of the ether. The healing was by first intention on the lines of the sutures. Sutures removed ten days after the operation.

The flap exerted a traction on the lower lid outwards and upwards. At the outer angle of the eye the upper margin of the flap pressed against the upper lid.

October 25, 1893. *More than three years after the operation there was no return of the epithelioma.* The upper border of the skin flap has formed part of the free border of the lower lid, and is continuous with it—there is no scar; it is not cicatricial in appearance; its thickness is normal, and would in every way be exactly like the normal lid border in appearance except that there are no eyelashes. The inner surface of the skin flap has the appearance of conjunctiva; no line of demarcation can be made between the inner surface of the skin flap and the conjunctiva of the lower lid. The skin flap supports the globe. Movements of the globe are not interfered with. There is a slight space between the globe and the outer canthus, due to traction of the flap. The lower lid is shortened. There is no noticeable scar or deformity.

Fig. 3 is from a photograph taken in March 1891; more than eight months after the operation. The negative was not retouched. The dark line below the lower lid is a shadow, due to a wrinkle, which does not show by ordinary observation.

64 East 58th Street.

Cases of Extra-Uterine Pregnancy—(I) Eleven Months' Pregnancy—Sudden Death. (II) Over Nine Months—Operation Ending with Hysterectomy—Recovery.

By S. W. BUDD, M. D., of Petersburg, Va.,

MEMBER VIRGINIA STATE BOARD OF MEDICAL EXAMINERS, ETC.

Though reports of operation for extra-uterine pregnancy have been numerous in the last few years, yet, as each case presents conditions peculiar to itself, I am encouraged to add the following:

CASE I.—Several years ago, a case of abdominal pregnancy was sent to this city by Dr. Allen, of Amelia county,

for operation. The pregnancy had existed about eleven months. There was nothing unusual in the history—frequent attacks of pain, occasional metrorrhagia, local tenderness, etc. The fœtus had been dead four months. The patient was emaciated and exhausted by suffering and septicæmia. She took ether badly, and, despite the utmost care, died suddenly before anæsthesia was established.

The post-mortem examination showed the sac to be adherent its whole length to the abdominal wall. The fœtus had begun to soften down. Had an operation been made sooner, there is every reason to believe her life could have been saved—the operation itself would have been as simple as opening a large abscess.

CASE II.—H. R., colored, æt. 33, mother of five children, labors normal. Her last menstruation occurred August 20, 1892. Five and a half weeks later, while returning from a neighbor's house, she was seized by a terrible pain in left side—she could not straighten herself—but managed to crawl home, a distance of a half mile. The pain lasted about six hours, leaving her very tender across the lower part of her abdomen.

A few days later, a second attack came on while in bed. She was seen next morning by Dr. Devaney, of Wakefield, who thought it a threatened miscarriage produced by a ride of forty miles in a horse-cart just previous to her first attack.

The remaining months of pregnancy were spent mostly in bed. Every few weeks she was seized with a violent paroxysm of pain, lasting about six or seven hours, with local pain and tenderness across the abdomen—more on the left side. At the fourth month, Dr. Devaney found a tumor in the left side of her abdomen. The following day he found "it had shifted its position to the median line, just above the pubis," and recognized it as the uterus. Quickening occurred about four and half months. At the sixth month the Doctor says: "The abdomen was quite large, shaped as in normal pregnancy, but with a protuberance in median line, between the umbilicus and pubis, the size of a man's fist."

The full term of pregnancy expired on the 27th of May, 1893. At this time, a glairy vaginal mucous secretion appeared. On the next day, she had the severest suffering yet experienced, differing in no way from previous attacks except in amount of pain. The patient affirms they were not

like labor pains. The attack lasted about "half a day," leaving her excessively tender over the abdomen.

Four days later, *June 2nd*, the last movement of the child was felt—convulsive in character.

June 3rd, a thick membrane passed from the vagina, which she described as a "pocket," the size of palm of hand, with a hole in "the middle," probably the decidua.

The next day her physician decided to send her to Petersburg for operation. She was received in "The Home for the Sick" *June 15th*, 1893. She stood the trip of ten miles in a wagon, and forty miles by rail, remarkably well, carried, of course, on a stretcher. The symptoms not being urgent, she was allowed till the next day for rest and preparation for the operation. The antiseptic details were carefully carried out by Dr. Hains.

On *June 16th*, the patient being anæsthetized, I made the first examination. I had the assistance and counsel of Drs. H. G. Leigh, Hains, Leigh, Jr., and J. H. Claiborne.

The abdomen presented the appearance of advanced pregnancy, except that it was nodulated, for through the abdominal wall could be seen and felt the breech and knees.

By digital examination, the head was felt to the right of and behind the uterus in Douglas' pouch. A sound passed readily into the uterus, turning over to the left side—its beak horizontal—the flat handle being vertical, and its point could be felt, thus locating the uterus to be well out of harm's way. Over-confidence in the correctness of this observation led to an unfortunate accident.

On opening the abdomen in the median line, commencing an inch and a half below the umbilicus, a rounded tumor presented, which was seized and stitched to the edges of the abdominal wound. An incision into the tumor revealed the fact that it was not the sac, we had secured but the uterus. There was a sharp hæmorrhage from the cut surface of the uterus. An attempt was made to control it by deep sutures, but the organ was so soft that they cut out on being tied. After several attempts, the effort was abandoned for the time, and the operation proceeded with.

On re-opening the abdominal wound, the peritoneum of omentum and intestines was found inflamed with numerous adhesions, though easily separated. The child was lying free in the abdominal cavity; the breech was to the left of and above the umbilicus, with head in the right side of pelvis. The abdominal wound was enlarged, and the child delivered.

The placenta was in the hollow of the sacrum behind the left broad ligament. Realizing the dangers of its removal, it was considered more hazardous to leave it, and thus convert the abdomen into a pus cavity. It was found to be firmly adherent, and had to be pulled from its attachments, a terrific hæmorrhage following. By pressure with large sponges, and pouring gallons of hot water into the abdomen, the bleeding was soon controlled.

In the meantime, the bleeding from the wounded uterus continued; the patient was now already pulseless from loss of blood and shock, with no time to lose. No resource remained but to perform a hysterectomy.

The ligaments on either side were divided between double ligatures—the cervix transfixed with a needle carrying a double ligature and tied in halves. In the absence of a clamp, a couple of ladies' hat-pins, previously sterilized by flame, were passed through the cervix at right angles, a heavy ligature placed below them, and the uterus cut away. The stump was secured in the lower angle of the wound.

The abdominal cavity was sponged dry, and the wound closed with silk. The shock was profound. Hypodermic of strychnia with nitro-glycerine was given, and the patient was surrounded by hot-water bottles. She rallied from shock in a few hours, but passed a restless night.

The next morning abdomen was distended. I took out a stitch, and with a syringe, tipped with rubber-tubing, removed a dram or two of bloody serum from pelvic cavity, and introduced a drainage-tube. Union throughout the upper two-thirds of the wound. Temperature, 100°; pulse, 140.

June 18th.—Resting better; drainage discontinued.

June 19th.—Temperature, 99½; pulse, 120; pedicle shrinking and sloughing.

June 24th.—The pins through the pedicle cannot be prevented from cutting into the abdominal walls, giving great pain. As there was good union around two-thirds circumference of the stump, one needle was withdrawn and the other removed the following day. The stump was cleaning off rapidly and retracting. At the end of a week after removing pins, it had settled to about an inch below the level of the abdominal wound. About this time there was found a sinus leading to a pocket at the site of the placental attachment containing an ounce or more of purulent matter. The patient's temperature that day attained its highest point, 101°. After irrigation and drainage, the temperature

fell to 99°. This pocket and sinus closed gradually, and the abdominal wound filled in over the stump of the pedicle. Discharged cured August 14th.

The sac removed with the placenta was small, and did not appear large enough to contain a full-term child. It would be interesting to know how long the child had been lying free in the abdominal cavity. A careful cross-examination of the patient failed to elicit any point to indicate the time when the sac ruptured. There was no history of any shock, only of cramping pains. The last paroxysm of pain occurred May 28th—the last foetal movement was felt five days later, June 2nd.

Another point of interest was the change in the position of the uterus. As already stated, on passing a sound in the uterus, it turned to the left, the handle was vertical, and its beak was felt well over in the left side. The uterus was doubtless forced to this position by pressure; but when the tension of the abdominal wall was relieved by an incision, it righted to its normal position.

The question as to the disposition of the placenta is not yet settled. The most popular method is to secure, and empty, the sac, avoiding the escape of its contents into the abdominal cavity, and to establish by its means an external fistula through which the debris and placenta may be discharged.

Dr. Joseph Price says: "When at all possible, from the nature of its attachments, it should be removed; when this cannot be done, of course there is nothing else to do but to leave it under conditions as favorable as possible. It should be emptied of its blood, made as dry as possible, the cord cut and tied, and the abdominal cavity closed. The peritoneum will digest it, which, thanks to its vast absorbent power, will, in most cases, with clean operation, remove what would otherwise negative the operation."

As to the time for operation, most surgeons agree. It should be performed as soon as the diagnosis is made, and Dr. Price adds: "If this condition be strongly probable, an

exploratory incision should be made. The earlier the operation, the safer it is."

In the first few months, not only is the patient in great peril from rupture of the sac, but the placental attachments are not so firm and extensive—its removal is easier and attended with less danger from hæmorrhage.

In the later months of pregnancy, Dr. Thomas says: "If there is a living child in the abdomen, remove it at the ninth month." "If the child is dead, I wait for the shrinkage of the placenta, unless unfavorable symptoms develop demanding interference."

But unfortunately "there are no signs by which we can ascertain the time when the placental vessels become obliterated. Schroeder removed the placenta three weeks after cessation of foetal movement without loss of blood, while a patient of Depaul died from placental hæmorrhage in an operation performed four months after the death of the foetus."—*Lusk's Midwifery*.

Correspondence.

Practical Instruction in Chemistry and Medical Jurisprudence in the South and Southwest.

NEW ORLEANS, LA., Dec. 11, 1893.

My Dear Doctor,—Feeling that your enlightened and cultured readers take some interest in this remote and quaint section of our Southland, I have taken pleasure in sending these few items which we hope will prove of sufficient interest to justify the expenditure of sufficient time for their perusal.

A quarter of a century ago (1868), I was elected by the Faculty and Board of Administrators of the University of Louisiana (now Tulane) the Professor of Chemistry; and at this date, December 11th, 1893, every member of the Medical Faculty (with but one exception), including such eminent men as Professors Warren, Stone, and James Jones, founders of the University of Louisiana, are dead; and, as far as our information extends, every member of the original Board of Administrators has answered *the last call*.

In 1868, I established a laboratory and instituted the first course of Practical Instruction in Medical Physics, Medical Chemistry, and Toxicology, and founded a practical laboratory at my personal expense.

The following extract from my address to the medical students will explain the objects of this practical course founded in 1868 :

“The object of this *Practical Course of Instruction in Medical Physics, Medical Chemistry, and Toxicology*, is to thoroughly prepare the student of medicine for the successful performance of those physical, chemical, pharmaceutical, and toxicological investigations and processes which are necessary to the *successful practice of medicine*.

The Science of Chemistry has contributed more to the physical and industrial progress and wealth of the human race than all the other branches of knowledge. Chemistry is the basis of *materia medica*, pharmacy, hygiene, physiology, pathology, and therapeutics; and it has furnished processes for accurate diagnosis, and agents of incalculable power and value to the *practitioner of medicine*.

Chemistry is an experimental science, and can be thoroughly learned and applied only in the practical laboratory. One hour of practical work and actual experimentation, with physical and chemical apparatus and re-agents, is worth one hundred hours of theoretical reading and study.

A *practical knowledge of Medical Chemistry* not only enlarges, to the greatest extent, the power and dominion of men over the properties and forces of matter, administers to the wants and comforts of life, and arms the skillful physician with his most sure and potent weapons in the treatment and prevention of diseases, but it also, in a prominent degree, develops and strengthens the mind of the medical student, by the habit of careful and experimental research, accurate observation, and patient and deep thought, which its practical study in the laboratory develops.

The student will be furnished with microscopes, apparatus and chemical re-agents, and will be exercised in those experiments which will be necessary for a practical knowledge of *medical chemistry*.

Students will be exercised in the preparation of inorganic and organic re-agents and medicines, and in the analysis of poisons. Special instruction will be given upon the microscopical and chemical characters, analysis, and products of the urine, in health and disease, and urinary deposits.

. Students may enter the practical laboratory at any time after the opening of the Medical Session."

This course of practical instruction in medical chemistry was continued at my individual expense, without interruption, until I was stricken down by malignant yellow fever, near the close of the great epidemic of 1878, which resulted in the formation of a large carbuncle the size of a large orange at the back of the neck, which was followed by septic fever of 150 days' duration and with nervous prostration.

The practical course was resumed in 1880 and continued until 1891, when ill health and pecuniary losses compelled its final abandonment. Throughout its existence the practical course was entirely voluntary on the part of the medical students. The didactic course in chemistry has been conducted without interruption from its commencement in 1868, until the present moment, December 11th, 1893; and some idea of its nature will best be gathered from the following questions propounded in writing in the competitive examination for valedictorian of the class of 1893-1894, by Messrs. Clarence Pierson and John T. Oechrer, of Louisiana:

Written Questions in Medical Chemistry, propounded December 9th, 1893, for the Degree of M. D., and also in the Competitive Examination for the Valedictorian of the Class of 1893-1895, Medical Department, Tulane University of Louisiana, by Joseph Jones, M. D., L.L. D., Professor of Chemistry.

I. Describe the polariscope and the method of determining the relative amounts and commercial values of crystallizable and uncrystallizable sugar in different samples of sugar.

II. Describe the chemical properties of the urine in diabetes mellitus; and describe the various tests and methods for qualitative and quantitative determination of diabetic sugar.

III. Describe the process of fermentation and of putrefaction; and give the chemical products and composition of vinous fermentation.

IV. Describe the spectroscope and the nature and value of spectroscopic analysis; especially when applied to the detection of human blood in blood stains.

V. Mention the compounds of mercury and detail the

mode of testing the purity of calomel; also for the bichloride of mercury in solution and in the animal tissues.

VI. Give the compounds of arsenicum, and describe the various tests for arsenicum and its compounds, especially the ammonia-nitrate of silver, the ammonia-sulphate of copper, Marsh's hydrogen and Reinch's copper process.

VII. Give the chemical composition and mode of preparation of the following substances and reagents: Hydrochloric acid, nitric acid, sulphuric acid, chloroform, sulphuric ether, chloral hydrate, nitric ether.

JOSEPH JONES, M. D., L.L. D.

156 Washington Avenue.

Analyses, Selections, etc.

Losophan in Eczema, Itching, Sycosis, Acne, Rosacea, Tinea.

Dr. J. V. Shoemaker says (*Med. Bul.*, Sept., 1893,) the activity of losophan depends upon the 80 per cent. of iodine entering into its composition. It appears in the form of white needles, which melt at 250.7° F. It is insoluble in water, slightly soluble in alcohol, but dissolves readily in ether, chloroform, benzol, and, at a temperature above 140° F., in fixed oils. Losophan is an irritant substance, and its action needs, therefore, to be closely watched. For this reason, it is not adapted to the treatment of acute diseases of the skin. In a number of chronic affections, however, its use has been followed by excellent results. In old cases of eczema, attended with considerable thickening of the integument and distressing itching, it has proved of service. It stimulates the absorbent vessels to remove the infiltrate and at the same time it relieves the *itching*. The latter symptom is, in other diseases, also allayed by the application of the same remedy. It may be employed, therefore, in cases of paræsthesia, prurigo, urticaria, etc. Losophan is of value in the squamous forms of eczema, where the skin is red, dry, infiltrated, and scaly. Fissured eczema—a rebellious and painful form of the disease—is benefitted by its application. The congestion and thickening of the surface are gradually lessened, and the cracks begin to heal. It may be successfully used in the latter period of *sycosis*, when the papules and pustules are numerous and may have coalesced into one mass, when the skin is swollen and thickened. The subjective symptoms are ameliorated, inflammatory

congestion subsides, and the infiltration is removed. The *chronic forms of acne*, especially the pustular and indurated, may be cured, in process of time, by its persevering use. The same remark is true of the *second stage of rosacea*. The irritant properties of losophan render it of avail in certain parasitic affections. It has, in some cases, proved curative in pediculosis and scabies, but has been more generally successful in the treatment of the *various forms of tinea, trichophytina, or ringworm*. Losophan has been used in the form of a lotion, or an ointment. Dr. Edmund Saalfeld, of Berlin, to whom we owe the first clinical investigation of this substance, found that the most generally suitable lotion consists of a 1 per cent. solution of losophan in three parts of alcohol with one part of water. As an ointment, it may be employed in the strength of 1 to 3 per cent.

An Enucleation Hook—A Cataract Hook—A Set of Needle Canaliculus Probes.

Dr. John Dunn, Richmond, Va., describes the hooks and needles (recently referred to in this journal) in *Medical Record*, Nov. 25, as follows: The larger of the double hooks is used in enucleation, after section of the muscles, to grasp the ball posterior to the insertion of the internal rectus, and to pull the ball outward and forward while section of the nerve is made. It differs from the usual hook for this purpose in being stronger and in the curve of the hooks.



The smaller double hook is used in the extraction of the lens when dislocated. It is a double pointed Stevens hook. The shank is flexible.

The lower cut represents a set of canaliculus probes. The smallest probe has a diameter of $\frac{1}{2}$ mm. throughout; the medium-sized probe has a rounded point $\frac{1}{2}$ mm., and increases gradually to $\frac{3}{4}$ mm. at its centre; the largest probe is $\frac{1}{2}$ mm. at its points, 1 mm. at the centre.

These needle-probes are of value whenever, for any reason, there is need to know whether the canaliculi are free; when there is need to dilate these little canals; and when it becomes necessary to dilate the punctum in order to admit the point of a syringe to wash out the lachrymal sac. It is well to begin with a medium-sized probe. These probes are not flexible, and are made simply for use in the canalic-



uli, where, in my hands, they have proved more serviceable than any probe with which I am acquainted.

The above instruments are made by Messrs. Bartlett, Garvens & Co., of Richmond, Va.

Operative Treatment of Stone in the Bladder.

Dr. William T. Briggs, of Nashville, Tenn., read before the Southern Surgical and Gynecological Association, in November, 1893, some notes of his personal experience with reference to operations for stone in the bladder. He said, living in the midst of the stone region, and in a city whose celebrity as a surgical centre has long been established, it has been his fortune to have met with an unusually large number of cases of vesical calculi. He had had two hundred and eighty-four cases of stone under observation during the past forty-two years. The Southern States had furnished the greatest number of the cases; a few had come from Western States; but Tennessee, Kentucky and Alabama have supplied the largest number; Georgia, Florida, Texas, Arkansas, North Carolina, Virginia, Missouri and Illinois have also contributed cases. Two hundred and seventy-two of the number were males; twelve females. One hundred and fifty-three were children, or youths under twenty years of age; one hundred and thirty-one were adults varying in age from twenty-one to eighty.

In operations for stone he has not restricted himself to any single method. He had done all of the operations, both cutting and crushing, and he considers it very fortunate that surgery has so many resources for the relief of this distressing and painful malady. The success of every method of operating largely depends on the preparatory treatment of the patient. The pre-eminent success of Dudley, Mott and others are doubtless due to the judicious treatment employed in the preparation of subjects for the operation; and Dr. Briggs is sure that his own success has been greatly enhanced by a strict observance of the preparatory treatment. In conclusion, Dr. Briggs said his experience in the surgical treatment of stone in the bladder would sustain the following propositions:

1. No method of operation is adapted to all cases.
2. Thorough preparatory treatment is essential to success.
3. Litholapaxy is the operation when the patient is an adult with a capacious and tolerant urethra with a bladder free from severe chronic cystitis and with a small or medium-sized stone, or, if large, of soft consistence.

4. The suprapubic is the best operation for large and hard calculi.

5. The medio-bilateral operation should be chosen in all other conditions, because it is the easiest, safest and best.

Bromoform in Pertussis.

According to Dr. C. W. Earle (*Chicago Med. Rec.*), "Letzerich has discovered in the sputum of patients suffering with pertussis a peculiar germ—small, elliptical, reddish-brown spores, some of which are budding. These vegetable parasites are particularly numerous during the convulsive stage. They cover the epiglottis, larynx, and trachea, and sometimes invade the alveoli, and produce catarrhal inflammation. Sputum from a pertussic patient will, in six to eight days, produce the peculiar cough."

Dr. Earle advises that bromoform should be given in doses from one-half drop to a child one year of age to two or three drops to children of five or six, suspended in some mucilaginous vehicle. Its action appears to be somewhat similar to belladonna. He tried it in fifty cases, and without exception the number of paroxysms was diminished very greatly within three days after the commencement of the bromoform treatment. A little dizziness may be experienced from an excessive dose. Stepp, of Nuremburg, who first advocated its use, treated 100 cases without a single instance of failure. Dr. Newman treated satisfactorily 25 cases. Dr. Schippers treated 250 cases with good results. Ullman concludes that it does no more good than other remedies long used.

Dr. Earle gives the following formula for an emulsion :

Ry.—Bromoform	gʒt. viij
Tr. opii camph.....	5j
Syr. acaciæ	5ss
Aq. anisi.....	} āā qs. ad. 5j
Aq. laurecerasii }	

M.—Shake well. S.—From one-half to one teaspoonful four times a day to a child one year old.—*Am. Prac. & News.*
—*Ind. Med. Jour.*, Jan., 1894.

Teucrin in Local Tuberculosis.

The December number of *Les Nouveaux remèdes* refers again to the efficiency of teucrin as a remedy in the treatment of local tubercular affections. Mosetig-Moorhof, according to the *Wiener medicinische Presse*, has been giving

the drug a fair trial, and is highly satisfied with the results. The medicament is used subcutaneously at the base of the degenerated tissue, and cures by causing sloughing of the tubercular parts. Great judgment must be exercised, it is said, both as to the quantity of the drug used and as to the number of applications; one is to be guided entirely by the slowness or rapidity of its action. The author has never seen any systemic re-action to the drug exhibited, and thinks that, employed with care, it is a very safe and sure remedy for the extirpation of local tuberculous disease.—*N. Y. Med. Jour.*, Jan. 6, 1894.

Book Notices.

Principles and Practice of Surgery. By JNO. ASHHURST, JR., M. D., Barton Professor of Surgery and Clinical Surgery in University of Pennsylvania. Surgeon to Pennsylvania Hospital, Philadelphia. New (sixth) Edition, Enlarged and Thoroughly Revised. 8vo. 1161 pages, with 656 Engravings and a Colored Plate. Cloth, \$6; Leather, \$7. Philadelphia: Lea Brothers & Co 1893.

"Ashhurst's Surgery" is the familiar standard of many practitioners. While much condensation has been made in the chapters of former editions that would admit of it without impairment of the text, other sections have required new material, that has necessarily increased the size of the volume some 25 pages. Prof. Nancrede has contributed an entirely new and excellent chapter on surgical bacteriology, which is illustrated by a full page plate; and the chapters on gynæcology, ophthalmology, and otology, have been revised respectively by Profs. B. C. Hirst, G. E. De Schweinitz, and B. A. Randall. We regret that the authors find so little in their historical accounts that has been done by Southern discoverers or surgeons as to cause scarcely an allusion to their names. For instance, Dr. Crawford Long actually used ether as a surgical anæsthetic in 1842, and several times in 1843; yet Dr. Ashhurst persists in recording that "the first really promising experiment in the introduction of anæsthesia dates back * * * to the year 1844;" and further records the error that "the first surgical operation * * done with the aid of ether was the removal of a tumor by Dr. John C. Warren * * * in 1846." In the section on su-

pra pubic operations for various conditions, we find no mention of the name of Dr. Hunter McGuire as associated with its reclaim and establishment on a permanent basis. Other omissions are made which would leave the impression that it is unfortunate for his renown for a Southern surgeon to make a discovery or establish the claims of an operation at his home. To call attention to such matters may seem trivial comments on so generally excellent a book for practitioners and students as this revised edition of Ashhurst's Surgery is; but not to make it now might lose the opportunity to correct what to us appear as errors of omission.

Manual of Diseases of the Nervous System. By W. R. GOWERS, M. D., F. R. C. P., F. R. S., Physician to the National Hospital for the Paralyzed and Epileptic. *Second Edition. Revised and Enlarged.* VOL. II. *Diseases of the Brain and Cranial Nerves. General and Functional Diseases of the Nervous System.* With 182 Illustrations, Including a Large Number of Figures. Philadelphia: P. Blakiston, Son & Co. 1893. Large 8vo. Pp. 1069. Cloth, \$4.50; Price for both Volumes, \$8. (For sale by West, Johnston & Co., Richmond.)

This "Manual," in two Volumes, gives the profession a magnificent work. Volume I, issued twenty months ago, was on "Diseases of the Spinal Cord and Nerves"—(price, \$3.50), and, by a most able reviewer, was spoken of "without reserve," as "the most clear, concise, and complete textbook upon diseases of the nervous system in any language." The revision of this second edition of Volume II has been so thorough as to require the rewriting of many pages so as to bring old chapters up to date, and to introduce new subjects which progress in neurology has demanded. Each section of a chapter is treated with a remarkable clearness of description, and the paragraphs on diagnosis and treatment are especially excellent. Among items of information to the general practitioner is the statement that thirty years ago 80 per cent. of cases of giddiness were supposed to be due solely to the stomach, and hence called vertigo of gastric origin. "But we now know that in 90 per cent. of the cases of definite giddiness a morbid state of the labyrinth is the real cause of the vertigo." Many such items of instruction are scattered through the book, which, with the systematic chapters on definite morbid conditions of the nervous system, make the "Manual" a most desirable book. The localization of cerebral centres make it also an essential guide book for the surgeon called on to trephine, etc.

System of Genito-Urinary Diseases, Syphilology, and Dermatology. By Various Authors. Edited by PRINCE A. MORROW, A. M., M. D. With Illustrations. In Three Volumes. VOL. II. SYPHILIOLOGY. New York: D. Appleton & Co. 1893. Royal 8vo. Pp. 917. (For sale by Subscription only.) Price per Vol.: Cloth, \$6.50; Sheep, \$7.50.

If our readers do not recall what we said in April number, 1893, about Volume I (which treated of *Genito-Urinary Diseases*), we may repeat in substance the same with equal application to Volume II—that however nearly perfect was the last issued work on syphilology, the one now under notice is better; and that we most unreservedly recommend this “System of Genito-Urinary Diseases, etc.,” as the proper one *for the practitioner*, as well as the specialist, if he has to limit himself to one treatise or “system.” This entire Volume II is taken up with syphilis in its various manifestations, and with chancroids—twenty-three authors, each distinguished in his own special department, giving the results of their best labors and study to the perfection of their respective tasks. Among the twenty-four full-page plates we notice that four of them are reproduced by photography and lithography—the first time that this process has been applied to medical subjects. The effect is very satisfactory in correct representations of clinical cases. Numerous figures are also well printed.

Text-Book of Physiology. By M. FOSTER, M. A., M. D., LL. D., F. R. S., Professor of Physiology in University of Cambridge, etc. *Fifth American from Fifth English Edition, Thoroughly Revised, with Notes and Additions, and 316 Illustrations.* Philadelphia: Lea Brothers & Co. 1893. 8vo. Pp. 1082. Cloth, \$4.50; Leather, \$5.50.

The present American edition, while representing the latest views on all physiological topics, is so nearly a reprint of the fourth, that we could scarcely recommend practitioners who own the latter edition to lay that aside in order to purchase this fifth edition. But we would advise any who has neither of these editions to secure this fifth American edition; for it is unquestionably the standard text-book on physiology for students and practitioners. The moderate price of this well-issued book at once shows how popular the work has become. The style is plain enough even for the beginner; the details are sufficient for the teacher; and the manner of dealing with the topics are well-arranged for the advantage of the practitioner.

Hand-Book of Ophthalmic Science and Practice. By HENRY E. JULER, F. R. C. S., Ophthalmic Surgeon to St. Mary's Hospital, Surgeon to Royal Westminster Ophthalmic Hospital, London. New (second) Edition Revised and Enlarged. 8vo. 562 pages, with 201 Engravings, 17 Colored Plates, Test Types and Color-Blindness Tests. Philadelphia: Lea Brothers & Co. 1893. Cloth, \$5.50; Leather, \$6.50.

Juler's *Hand-Book* contains, accurately and concisely stated, the principles and more important facts of ophthalmology. It is singularly devoid of padding and repetition, and is thus a pleasing book of reference. It lacks, however, in completeness, some important details being omitted. For instance, a chapter on embryology would much enhance the value of the book. Much more, in the light of George Stevens' work, could be added with advantage on the subject of muscular insufficiency. No mention is made of the use of Knapp's roller forceps in either follicular or granular conjunctivitis; nor of the use of cocaine in enucleation, although its use has rendered, in most cases, the administration of a general anæsthetic neither necessary nor desirable. In spite of these and other omissions, Juler has given us, as the result of his work, a pleasing *Hand-Book of Ophthalmic Science and Practice*.
D.

Students' Dictionary of Medicine and Allied Sciences. By ALEXANDER DUANE, M. D., Assistant Surgeon New York Ophthalmic and Aural Institute; Reviser of Medical Terms for Webster's International Dictionary, etc. Philadelphia: Lea Brothers & Co. 1893. 8vo. Pages 650. Cloth or leather.

It will be specially gratifying to the Medical Society of Virginia to learn that one of its Fellows is the author of the best Medical Dictionary for its size that is anywhere published. The volume comprises the pronunciation, derivation and full explanation of medical terms, together with much collateral descriptive matter, numerous tables, etc. Utility with accuracy of information have been the guiding designs.

Hence, we find much descriptive and explanatory matter under the more important headings. Thus, under the principal diseases, a sketch is given of their causation, symptoms and treatment; under the more important organs, an outline of their structure and functions; under each drug, an account of its action and therapeutic uses, and of preparations of it official in the latest editions of the United States, Great Britain and German Pharma-

copœias. Important physiological functions and generic biological and chemical terms receive similar explanations. Such encyclopædic information constitutes a characteristic feature of this Dictionary. Anatomical data, bacteria fermentations, monstrosities, etc., have been arranged in tables—thus giving a feature which is not even given in the ordinary text-books. The publishers have done their part remarkably well. In short, Dr. Duane has shown himself so specially gifted as a dictionary maker that we may predict that each successive edition of his work will approach more and more the character of the unabridged dictionaries as generally understood.

Chemistry and Physics. By JOSEPH STRUTHERS, Ph. B., Columbia College School of Mines, N. Y.; D. W. WARD, Ph. B., Columbia College School of Mines, N. Y., and CHARLES H. WILLMARTH, M. S., N. Y. (The Students' Quiz Series.) Philadelphia: Lea Brothers & Co. 1893. Cloth, 12mo. Pp. 288. \$1.

This is the twelfth (and next to the last) of the "Students' Quiz Series" prepared for teachers and students by well known teachers and specialists of New York. The volume deals especially with those facts of chemistry and physics which are requisite to a thorough medical education. Its price is so moderate only because of the large edition and the special popular demand for this valuable "Series." The work is succinctly full, and is up to date in all its teachings.

Minor Surgery and Bandaging. By HENRY R. WHARTON, M. D., Demonstrator of Surgery in the University of Pennsylvania. 12mo. 529 pages, with 416 Engravings, many being Photographic. Cloth, \$3 00. Philadelphia: Lea Brothers & Co. 1893.

This is an excellent practical book for every general practitioner, as well as for students. The pictures of bandaging are illustrated by cuts from photographs. The details of all sorts of surgical work that the general practitioner may be called upon to do, are given so plainly that it would be hard for him to go wrong who proceeds as the pictures and the text direct. Antiseptic surgery is described according to the most approved practice. The author has given information about more subjects than are usually included in a book of minor surgery. The book includes the treatment of fractures and dislocations, tracheotomy, laryngeal intubation, ligations of arteries and amputations, beside

descriptions of such things as phlebotomy, transfusion, artificial respiration, etc., etc.

Treatise on the Science and Practice of Midwifery. By W. S. PLAYFAIR, M. D., F. R. C. P., Professor of Obstetric Medicine in King's College, London; Examiner in Midwifery to the Universities of Cambridge and London, and to the Royal College of Physicians. *Sixth American from the Eighth English Edition.* Edited, with Additions, by ROBERT P. HARRIS, M. D. 8vo. 697 pages, with 217 Engravings and 5 Plates. Cloth, \$4.00; leather, \$5.00. Philadelphia: Lea Brothers & Co. 1893.

It is wonderful what progress has been made in obstetrics, etc., during the past few years. Abdominal section has supplanted the need of craniotomy; symphyseotomy has been introduced; and a flood of light has been thrown on the subjects of extra-uterine pregnancy, puerperal septicæmia, etc.—the sections on these subjects even requiring rewriting since the edition of this *Treatise* in 1889. Thus revised both by the author and the American editor, *Playfair's Midwifery* still holds its position in the very front rank of excellent authoritative text-books. Several illustrations have been introduced which add to the value of this edition. The work, as now issued, is as thoroughly practical in all of its details as it is possible for a book of its size or price to be.

Supplement to the Reference Handbook of the Medical Sciences. By Various Writers. Illustrated by Chromolithographs and Fine Wood Engravings. Edited by ALBERT H. BUCK, M. D., New York city. Vol. IX. New York: William Wood & Co. 1893. Quarto. Pp. 1,076. Cloth, \$6.00.

This magnificent work is in keeping with the eight volumes composing the "Reference Handbook" as issued by Messrs. Wm. Wood & Co. some years ago. It contains articles by 121 mostly gifted authors to supplement omissions, or else to revise such sections of the original work as the advance of scientific information during the past few years has demanded. The publishers are to be congratulated in that they adopted the plan of issuing a supplemental volume at \$6 rather than to issue a revised edition of all eight of the volumes, which would have cost nearly \$50. So that owners of the original series have only to purchase this *supplement* in order to get a revised edition fully up to date. This supplement is indispensable to those having the volumes of the *Reference Handbook*; and even to those who have not that series, there is so much of great value in

this added volume that its purchase alone would supply a valuable work to the medical library. The plan adopted by Messrs. Wood & Co. in issuing this *supplement*, if adopted by publishers of other expensive series, would make more popular the purchase of scientific encyclopædias of to-day; for then the owner would feel that he has only to buy an added volume every few years to keep his encyclopædia up to date instead of being compelled to buy anew the entire set of revised volumes at original cost.

Editorial.

Association of American Medical Colleges.

That the demand for at least "three courses of graded instruction of not less than six months each in three separate years" as essentials for graduation in medicine is well established in this country, is attested by the fact that some of the leading colleges of the United States have adopted the four years' course of graded instruction. And now we observe that Rush Medical College takes the lead in proposing the following amendment to the Constitution of the Association of American Medical Colleges (Section 5, Art. III.): "From students who intend to graduate in 1899 or in subsequent classes, four years of medical study, and an attendance upon four annual courses of lectures of not less than six months' duration each will be required. Provided, that graduates of literary colleges who have taken a course of four years, including study in the natural sciences, and graduates from universities and colleges that furnish a suitable course of scientific studies, graduates of schools of pharmacy that require three years of study and adequate preliminary education, and graduates of dental colleges requiring two years of study and adequate preliminary education, may be admitted to the second year's work or course of lectures in the college without examination." In short, the amendment, if adopted, will require of all primary matriculates of the session of 1895 attendance upon four full courses of instruction before receiving the degree of M. D. There are at present seventy-one colleges members of the Association. The Constitution to be altered or amended requires a vote of two-thirds of all the delegates present at a stated meeting. The fifth annual (or stated) meeting is to

be held in San Francisco, Cal., at 3 P. M. Wednesday, June 6th, 1894, which is during the week of the session of the American Medical Association, to be held in that city. Whether or not a full representation of all the Eastern colleges can be secured at so remote a distance is questionable; and it is worthy of careful consideration whether such proposed amendment should be called up for final adoption or rejection unless at least three-fourths of the total number of colleges, members of the Association, are represented in the meeting.

In keeping with the spirit of the proposed amendment, the President of the Association, Dr. N. S. Davis, of Chicago, has appointed the following persons as a special committee to prepare a new schedule of minimum requirements, to be submitted at the meeting in San Francisco: Drs. E. L. Holmes, Chicago, Chairman, Rush Med. Col.; Reginald H. Fitz, Boston, Harvard Med. Col.; Victor C. Vaughan, Ann Arbor, Dept. Med., Univ. Mich.; John Osler, Baltimore, Johns Hopkins Med. Col.; Wm. E. Quine, Chicago, Col. Phys. and Surg.; P. S. Connor, Cincinnati, Ohio Med. Col.; Dudley S. Reynolds, Louisville, Hosp. Col. Med.; N. S. Davis, Jr., Chicago Med. Col.; Perry H. Millard, St. Paul, Col. Med. and Surg., Univ. of Minn., and Secretary of Association. The committee will meet at Grand Pacific Hotel, Chicago, 3 P. M. Wednesday, February 7th, 1894.

Colleges that are members of the Association are requested to aid the committee by advice or representation. But it is particularly desirable that such colleges should be represented by a formally-appointed delegate at the meeting next June in San Francisco. Colleges unable to be represented by regularly appointed delegates are requested to inform the Secretary (Dr. Millard) of their attitude on the proposed amendment, so that it may be submitted or made known to the Convention before final action is taken. Colleges electing delegates should indicate in their credentials if they have full power to act, and should furnish the Secretary the names of the delegates elected as soon as practicable. Proxy cannot be delegated to any one not directly connected with the college desiring representation. Each college is entitled to but one delegate.

Ever since this journal was founded in 1874, it has been on record as favoring the advancement of the standard of medical education in the United States, and especially in the Southern States. Hence its earnest advocacy of the establishment of State Boards of Medical Examiners which

would keep up a high standard of requirements for those who might seek to enter the profession in those States. It was easy to foresee that if such Boards of Examiners did their duty, the medical colleges of the country would be compelled to elevate their standards of instruction, which has been accomplished. So that the measure now proposed for adoption by the Association of American Medical Colleges is but a step that might have been anticipated. We want nothing but thoroughly competent persons in the medical profession; for to them we have to commit all that concerns the highest interest of the human race. We want them South as well as elsewhere throughout this vast continent. Hence, we trust that no simply selfish motive with reference to securing a given number of students will influence any Southern college in resisting the proposed advance. If experience has taught the colleges in the larger centres, with their greater means and fuller equipments, that it requires full three or four years to prepare their students for the practice of medicine, it is but natural to suppose that colleges in smaller centres and with fewer equipments, cannot prepare their students for graduation in medicine in a shorter length of time. Health and life are as valuable to us of the South as it is to citizens anywhere else.

Doctors in the Virginia Legislature.

The General Assembly of Virginia, now in session, will have the distinction of having more practitioners of medicine in its composition than any we have ever known. In the Senate are Drs. J. W. Southall George W. Le Cato, and ——— Barnes; in the House of Delegates are Drs. S. B. Barham, A. S. Priddy, R. W. Saunders, Knox Thompson, and ——— Smith. Drs. Southall and Priddy are members of the Medical Examining Board of Virginia. Seven of the eight are Fellows of the Medical Society of Virginia, and most of them are popular active practitioners in their respective counties, and know the needs of the sick and the higher interests of the profession of the State. It is to be hoped that these representative members of the profession will exert their due influence upon the other legislators and succeed in establishing a satisfactory means of providing hospital treatment for the curable sick or afflicted in the State who are yet unable to pay for hospital attentions. It is a stigma upon Virginia that there is not a charity hospital within its limits, nor yet any provision for the proper medical and surgical treatment of the worthy sick poor who,

if cured, would become self-sustaining and useful citizens. We understand that bills have been, or will be introduced, which will provide for such medical or surgical treatment of the curable sick or diseased. Other matters, in which the profession as well as the people of Virginia are interested, are the bills revising the laws now existing with reference to the Medical Examining Board of Virginia, the Virginia State Board of Health, etc.

The Virginia State Board of Medical Examiners' Bill,

As revised by the Committee of the Board, and approved by the Medical Society of Virginia, has passed the House of Delegates, and is now before the Senate of Virginia. The object of the revision, as is well known, is to prevent itinerant quacks and charlatans from securing the advantage over citizens of the State in practicing or attempting to practice in Virginia for fee or reward without being examined as to their competency by the Board of Medical Examiners. As we go to press, we are advised that a circular bearing the ear-marks of quackery, as practiced by some one in Boston, has been placed upon the desks of most of the Virginia Senators, urging them not to pass the revised bill, as its passage would prevent such quacks as have infested Virginia in time past from further defrauding the innocent victims of their wonderful powers to conceal trickery. We trust that, in this day of progress, it is only necessary to allude to the fact in order to keep the unsuspecting law-makers from being caught napping.

The Richmond Academy of Medicine

Holds semi-monthly meetings in the Y. M. C. A. building, Main and Sixth streets, every second and fourth Tuesday nights. All members of the profession visiting the city are always welcomed. During the past year, under the Presidency of Dr. Hugh M. Taylor, there has been a session every meeting night, and the membership has grown so as to include nearly all of the regular profession residing in the cities of Richmond and Manchester. For the year 1894, Dr. J. Spottswood Wellford was unanimously elected President, and Drs John F. Woodward and Mark W. Peyser were re-elected Secretary and Assistant Secretary respectively. The annual supper was enjoyed in December, when several of the practitioners in the General Assembly were guests.

Vaccine Virus.

In several sections of Virginia, West Virginia, and East Tennessee, during the past year, there have been outbreaks of small-pox, which have led a great number of our subscribers in the country districts to write us, asking such questions as "Who is the State Vaccine Agent?" "How can vaccine points be obtained without cost to the doctor?" etc. So far as Virginia is concerned, there is no State Vaccine Agent, nor is there any provision for the free supply of vaccine points, etc., to any one. The Virginia State Board of Health, at its first meeting after reorganization last spring, called special attention to the subject of necessity of general prompt vaccination, because of cases of small-pox then in Virginia, and the Board of Public Instruction of the State issued circular letters to superintendents of county, town, and city School Boards, calling attention to the law requiring that all children entering public schools should first be satisfactorily vaccinated. There are two vaccine agencies in this State, long advertised in this journal, either of which supplies excellent vaccine points at moderate cost—\$1 for ten points—namely, the New England Vaccine Co., of which Messrs. W. P. Poythress & Co., 919 E. Main street, Richmond, Va., and the National Vaccine Co., of which the Broad Street Pharmacy (T. A. Miller & Co.), 431-433 East Broad street, Richmond, Va., are the respective State agents.

Tulane University of New Orleans.

The Richardson Memorial Addition to the Tulane University of Louisiana has been completed, and was dedicated with appropriate and beautiful ceremonies on the 4th day of November. While the late Dr. Tobias Gibson Richardson was yet living, his wife, Mrs. Ida A. Richardson, desiring to erect a monument to the memory of her husband, contributed the sum of one hundred thousand dollars for the erection of a building for the Medical Department of Tulane University of Louisiana. Dr. Richardson, a surgeon of national reputation, held a professorship in this University from 1858 to 1889, and was dean of the faculty for twenty years. This munificent gift was made by Mrs. Richardson with his full knowledge and sanction, and he lived to see the work well under way. After the death of Dr. Richardson, Mrs. Richardson, desiring to make this monument to her husband more complete, added sufficient funds to the

large amount already contributed to complete, furnish and equip the building ready for occupancy.—*Ind. Med. Jour.*, Jan., 1894.

The Antikamnia 1894 Visiting List

Consists of a flexible case with an inside pocket in each cover, and an adaptable list for as many patients as a country practitioner is apt to visit in three months. In each case is a neatly arranged card, giving many excellent selected prescriptions of antikamnia for numerous conditions. This drug has proven itself so useful, and is so popular, that it was to be expected that unprincipled parties would attempt imitations and substitutions. Hence, of course, always see that genuine antikamnia is dispensed when that article is required. Physicians furnishing their address to Antikamnia Chemical Co., 717 Locust street, St. Louis, Mo., will receive "Vest pocket box," containing samples of tablets, etc.

Physician's Visiting List (Lindsay & Blakiston's) for 1894.

This "List" proves its popularity by the fact that this is its 43rd year of publication. It contains all the necessary printed matter and blank leaves to make it a most useful "Visiting List." Beside the regular edition, well suited in size, etc., for the pocket, there are the interleaved, the perpetual, and the monthly editions, etc., ranging in prices from \$1 to \$3, according to the number of patients per day or week—whether 25, 50, or 100—and whether one or two volumes for each six months, etc. It may be bought through all the booksellers and druggists.

American Medical Publishers' Association.

The First Annual Meeting of this Association was held in the Grand Hotel, Cincinnati, on Monday, December 4th, 1893, and steps were taken in the direction of active, routine work. The by-laws and rules were revised and amended, while the name was modified in accordance with a demand from medical publishers of a general nature who desired to become members of the Association. The active co-operation of every medical publisher is earnestly solicited. Next meeting in Washington, D. C., September, 1894. Officers: President, Dr. Landon B. Edwards, Richmond, Va.; Vice-President, Dr. J. C. Culbertson, Cincinnati, Ohio; Treasurer,

J. MacDonald, Jr., New York city. For application blanks and copies of the Articles of Association, address Charles Wood Fassett, Secretary, corner Sixth and Charles street, St. Joseph, Mo.

Caution to Anæsthetizers.

During a recent clinic by Prof. Hunter McGuire in the new amphitheatre of the College of Physicians and Surgeons, Richmond, Va., while chloroform was being administered to a patient on whom excision of portions of the bones of the leg was about to be performed, the patient suddenly stopped breathing, the face became purple, etc., while the heart continued to beat. In a moment, Dr. McGuire recognized that the condition was due to the dropping back of the tongue, obstructing breathing. With thumbs behind the rami of the inferior maxilla, he pushed that bone forward, thus lifting up the tongue, and the patient at once began breathing easily, and was kept thoroughly under the anæsthetic for the time necessary for the operation. While this procedure is not, by any means, a new one, it is worth while to record such incidents so as to keep the surgeon or physician well on his guard so as to act at the moment when by-standers are dazed by the shock of an impending accidental death. In short, in using an anæsthetic, keep your wits about you, and look out for the sudden emergencies.

The Columbia Chemical Co. have Removed

To 1704 G street N. W., Washington, D. C. Their former home, it will be remembered, was New York. This Company has long since established a good name because of the careful preparation of its products under the supervision of competent chemists. See their advertisement on page 7.

Physicians' Chart-Book,

As prepared by Dr. J. A. Hawkins, of Pittsburg, Pa., and neatly published in pocket size, etc., by Messrs. Bailey & Fairchild, 29 Park Row, New York, N. Y., is a very useful book for practitioners who keep notes of temperature, pulse, respiration, etc. A book of 100 pages costs only 50 cts. If doctors kept notes of their cases in such form as here provided, it would be an easy matter for them to prepare correct notes for publication, etc.

Proposed Medical Practice Act in Ohio.

In the proposed "act to regulate the practice of medicine in the State of Ohio," now before the General Assembly of that State, it is provided that "the Governor, by and with the advice of the Senate, shall appoint a State Board of Medical Registration and Examination, consisting of seven members, who shall be physicians in good standing in their profession. Representation shall be given to the schools of practice in the State as nearly as possible in proportion to their numerical strength in the State, provided, however, that no one school of practice shall have a majority of the whole Board." The Secretary's salary not exceeding \$1,500 a year. Members' per diem \$10 for time actually employed, and necessary expenses. Meetings quarterly. Graduates must present their diplomas for proper identification and registration—fee, \$5; candidates not holding diplomas shall be examined by the Board—fee, \$25. Board has power to revoke its certificate for cause. The proposed law is the result of a convention of doctors of the different schools of practice, and is the best that can be done under the circumstances.

The International Medical Annual, 1894.

The twelfth yearly issue of this eminently useful work is announced by the Publisher, Mr. E. B. Treat, 5 Cooper Union, New York city, as in early publication. It will be issued as an octavo of about 600 pages, illustrated, in morocco cloth, uniform with "Treat's Medical Classics." It will be the conjoint work of 42 distinguished specialists of America and Europe, and contain about 6,000 notes concerning advances recorded during 1893 relating to diseases and their remedies. In short, the design is to bring the general practitioner into direct communication with those who are advancing the science of medicine, etc. Price, \$2.75, post-free.

Mr. Treat has also in press a new and enlarged edition of "Manual of Clinical Diagnosis," by Prof. Albert Abrams, of San Francisco, \$2.75; second and enlarged edition of "Diseases of the Hair and Scalp," by Dr. Geo. T. Jackson, of New York, \$2.75; "How to Use the Forceps," by Prof. H. G. Landis, of Columbus, Ohio, enlarged edition by Dr. C. H. Bushong, of New York, \$1.75.

The Chesapeake and Ohio Railroad Hospital at Clifton Forge, Va.,

Is in full operation, well equipped and doing excellent service for the care of the sick or injured employees of that section. The chief surgeon of the railroad, Dr. C. W. P. Brock, of Richmond, Va., deserves great credit for devoting so much of his great influences for the erection and equipment of the first distinctively railway hospital in this State, if not in the South. Employees of the railroad and others injured by accident elsewhere than at Clifton Forge, are transported to that hospital and maintained and treated at the expense of the railroad corporation.

National Association of Railway Surgeons.

This remarkably prosperous and valuable Association will hold its next annual meeting in Galveston, Texas, during May, 1894. Dr. Galbraith, of Omaha, is a worthy successor of the former President, Dr. C. W. P. Brock, of Richmond, under whose wonderful ability to perfect such organizations, aided by the untiring zeal and well-directed efforts of the Secretary, Dr. R. Harvey Reed, of Columbus, Ohio, the Association grew in membership to about 1,600, while its sessions have proven to be among the most valuable of medical and surgical meetings in this country. The *Railway Age* (weekly), of Chicago (\$4 a year), contains a surgical department under the editorship of Dr. R. Harvey Reed, which department compares most favorably with many of the leading medical journals of this country.

A. S. Aloe Company Catalogue of Surgical Instruments, etc.

Is nicely issued, in cloth binding, etc., and can be had by any of our readers who remit 50 cts. to the St. Louis house, to pay charges to the nearest express office. The book is abundantly illustrated, with complete index, etc. The *net* prices only are given.

The Phenique Chemical Company Advertisement

Was wrongly indexed in the December number of this journal. The composition of "Saltonia" (carbonates of lithium, sodium, magnesium, iron and calcium, bromides of lithia and strontium, with the chloride and sulphate of potassium) suggests its uses—either alone or in combination—in forms of disorders named in advertisement, page 59.

Cholera Again.

Cholera seems to be again on the increase at St. Petersburg. The average number of cases for the past week have been 150, and the deaths 20 daily. On December 23rd, the British steamer *Eton*, from Sovlina, at the Danube's mouth, for Rotterdam, was detained at Gravesend for twenty-four hours for fumigation and examination. There have been three cases of cholera aboard of her. The man who was stricken last had recovered on December 13. Cholera has again broken out at Liege, where it was supposed to have been stamped out.—*Jour. Amer. Med. Assn.*, Jan. 6, 1894.

Medical Department University of Minnesota.

The Board of Regents of the University of Minnesota have extended the course of instruction in the College of Medicine and Surgery from three to four years of eight and one-half months each course. The new rule will become operative commencing in 1895.

The American Medical Association

Is to meet at San Francisco on June 5, 1894, for the first time since 1871, which was its first meeting on the Pacific Coast. This date will occur during the Midwinter Fair, whose success is now assured, and which is certain to attract a large influx from the States east of the Rocky Mountains. There is no doubt that this concurrence is favorable to a large attendance of medical men. Physicians who attend the meeting will, at least, have all the concessions granted to those coming to the Fair; possibly the Committee of Arrangements may be able to obtain more favorable terms, especially in hotel rates.

Ponca Compound (Mellier) is an excellent uterine alterative, acting specifically as a tonic to the nerve forces of the pelvic organs, thus stimulating the absorbents to remove engorgements and plastic exudations. It is particularly valuable where manipulative or mechanical interference is undesirable or impossible.

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Original Communications.

ART. I.—A Contribution to the Study of Ectopic Gestation.*

By GEO. TUCKER HARRISON, M. A., M. D., of New York, N. Y.

HONORARY FELLOW MEDICAL SOCIETY OF VIRGINIA, ETC.

It may be truly said that one of the burning questions of the day is furnished by ectopic gestation. Notwithstanding the illumination the subject has received from recent investigation, there are many dark points still awaiting exposition. In inviting your attention, therefore, to the study, with me, of this interesting theme, I shall be sure, in the outset, that what may be lacking in my mode of presentation will be largely supplied by the profound importance of the subject itself. The reason is obvious; from the moment the fecundated ovum is embedded outside of the uterus, the patient affected by this anomaly is exposed to constant dangers that threaten her existence. In no other morbid condition do we find ourselves so often confronted with such perplexing problems, requiring for their solution the

* Read before Medical Society of Virginia, Charlottesville, Va., Oct. 5th, 1893.

same amount of readiness, skill, and sagacity, as we do in this.

The most frequent seat of ectopic gestation is, beyond all comparison, the Fallopian tube. The doubts expressed by some authors in regard to the existence of ovarian pregnancy have been settled with absolute precision by such demonstrative cases, coming under this category, as those reported by Leopold, Winckel, Fritsch, and Gottschalk, respectively, to mention no others. The rarity of this form, however, is not to be questioned. Most authors now deny the existence of a primary development of the ovum on the peritoneum. No *à priori* considerations can be urged, however, which would make such an occurrence impossible. As Fritsch correctly observes: "It is an indispensable condition precedent to the development of an ovum that it should be fixed. In the peritoneal space, no physiological arrangement exists by means of which the ovum may be fixed on a definite point. If, however, pseudo-membranes form a pocket, in which the ovum is caught with no possibility of escape, it will undergo further development." Up to the present moment, it must be admitted that no case of primary abdominal pregnancy has been absolutely demonstrated.

In the domain of *etiology*, there has been a vast amount of plausible and probable explanation, but comparatively little demonstrated truth. This much, however, is certain, that the most potent etiological factor in the production of ectopic gestation is perimetritis, as years ago maintained by Virchow and Hecker. Flexions, distortions, and constrictions of the tube, as a result of adhesions existing in the pelvic peritoneum, render it impervious, or, at any rate, furnish obstacles to the progression of the ovum. The anatomical researches of Werth, Frommel, Orthmaun, Zedel, and others, have shown the existence of tubal catarrh in cases studied by them, and this pathological condition furnishes, no doubt, a cause of ectopic gestation.

The view expressed by Olshausen, that purulent tubal

catarrh, in all probability, is not rarely the cause of ectopic pregnancies, is, however, not tenable in the light of modern investigation. As Zedel remarks: "Not only my cases, but almost all gravidities described by other authors, rather confirm the view of Frommel, that it is a matter of impossibility for an ovum to enter upon further development on a mucous membrane, bared of its epithelium by inflammatory changes, or covered with diseased epithelium." If these observations are confirmed by further research, it will be readily seen that the pathological views of Lawson Tait, which involve, as a postulate, a morbid state of the tubal epithelium to such an extent that it is deprived of its cilia, must fall to the ground.

The explanation advanced by Freund, for a certain class of cases, of a too pronounced tortuosity, the result of imperfect development, as a consequence of which the quickly enlarging fecundated ovum finds difficulty in its forward movement, and is retained in an angle of the tube, has, at any rate, probability on its side. Whether a polypus in the tube is to be considered an etiological factor, or simply an incidental phenomenon, must at present be left undecided.

The view of Sippel is not without probability, that perhaps the ovum that had been fecundated on one side, in its transmigration to the other side, becomes too large to pass the narrow canal of the tube. It is not to be denied that, in seeking an explanation of this anomaly, attention has heretofore been too exclusively fixed upon the tube, while the behavior of the ovum has been, to a large extent, neglected. Is it not possible, as Fritsch suggests, that one ovum may be larger than another, and so cannot pass the narrow lumen? The comparative frequency of twin ova would seem to argue in favor of this view. Fritsch believes that the old view of Rokitansky, that occasionally a hernia of the mucous membrane exists, and that if the ovum is caught in such a pocket, it will remain there, has a good deal of probability.

Ectopic gestation usually occurs in women who have pre-

viously borne children, and in whom those changes of the tubes and pelvic peritoneum, that favor the origin of this anomaly, have been acquired in a previous puerperium. In those cases in which congenital anomalies of the tubes exist the first pregnancy may be extra-uterine. So, too, if the tubes and pelvic peritoneum have been the seat of gonorrhœal inflammation of not too virulent a type before conception, the same thing may occur. Of late, reports of cases are multiplying in which the same woman has been repeatedly the subject of extra-uterine pregnancy. Cases have also been reported in which an extra- and intra-uterine pregnancy simultaneously existed. In three instances, respectively, I observed that an extra-uterine was followed by an intra-uterine pregnancy. The same phenomenon has been mentioned by others.

It seems to be almost a law without variation, that a long sterility precedes the development of an ectopic gestation, indicating an obstacle to conception either congenital or acquired.

In all kinds of ectopic gestation the general organism undergoes all the changes characteristic of a normal pregnancy—a fact of vast significance. The body of the uterus is enlarged, as a consequence of the same processes that occur in the uterine muscular tissue in normal pregnancy, and its endometrium is transformed, into a decidua vera.

In regard to the *histology of tubal pregnancy*, it may suffice to say that the tubal mucous membrane is transformed into a decidua just as it occurs in the endometrium. To enter farther into anatomical details is beyond the scope of this paper.

The group of symptoms pertaining to a case of ectopic pregnancy are, as a rule, characteristic. In the first few weeks, no unusual phenomena indicate an abnormal condition. The woman may think herself pregnant because menstruation has ceased. Soon, however, annoying sensations of less or greater intensity appear that depend partly on peritoneal irritation, and in part are due to disturbances in the devel-

opment of the ovum. The signs of irritation of the peritoneum consist in intense, oft-recurring pains, in gastric disturbances, abdominal distension and slight febrile excursions, producing, when long continued, a characteristic cachexia. In some rare cases, however, the patient is thrown into a sudden collapse, in consequence of rupture of the foetal sac, with no premonitory symptoms. With the other phenomena of ectopic gestation are associated uterine contractions that either cause slight hæmorrhage or expulsion of the uterine decidua. These hæmorrhages may persist for a long time.

It has usually been assumed that the expulsion of the uterine decidua was a conclusive proof of the death of the foetus; but while this is true generally, there are exceptions to this rule. In the second, third or fourth month in tubal pregnancy—and with this form we are chiefly concerned in practice—symptoms of internal hæmorrhage appear. This may indicate rupture of the foetal sac, and the farther the pregnancy is advanced, so much the more intense will the symptoms be.

The hæmorrhage either takes place into the free abdominal cavity or into Douglas' space that had previously been shut off by pseudo-membranes. In the latter case, a *retro-uterine hæmatocele* is formed.

If the hæmorrhage takes place into the abdominal cavity and peritonitis is already existent; or, this is possible but not proven, if infectious germs attain to the peritoneum with the blood, a closed space may be formed by the adhesions, and so an *hæmatocele* be formed.

The bleeding may also take place between the folds of the broad ligament, constituting an *intra-ligamentous hæmatoma*. When the blood is poured into the free abdominal cavity, however, there is the greatest probability that the patient will bleed to death, as there is no intra-abdominal pressure to act upon the bleeding point.

The symptoms connected with *hæmatocele* or *hæmatoma*, it may be remarked, are those evoked by compression o

neighboring organs and acute anæmia. In other cases, the internal hæmorrhage is indicative of tubal abortion. According to the beautiful researches of M. Muret,* made at the Strassburg Frauenklinik, the following facts are demonstrated:

1. "*Complete tubal abortion* leads, with more or less severe symptoms, to the formation of an hæmatocele, and this may, as well known, take different terminations.

2. "*In complete tubal abortion* the symptoms of severe internal hæmorrhage are slighter than in rupture of the pregnant tube. There may, however, be severe phenomena of shock, that may be explained, partly by the painful contractions of the tube, in a very excitable nervous system, partly by the mechanical action of the blood on the peritoneum. Occasionally sugar appears in the urine of an acute case.

3. "*In incomplete protracted tubal abortion* destruction of the ovum and the formation of a mole in the tube takes place as a consequence of the hæmorrhage. The blood that has been effused into the tube is discharged into the abdominal cavity, if the ostium abdominale is open, and leads to the formation of an hæmatocele.

"As long as the degenerated ovum, or a part of it, remains in the tube, will it lead, just as in a protracted uterine abortion similarly, to further hæmorrhages, occurring in successive attacks, with the consequent effect of an enlargement of the hæmatocele.

"*The clinical picture* consists, first of all, in tubal contractions, expulsion of a decidua, and then in several attacks of labor-like pains, occurring in succession, attended by symptoms of internal hæmorrhage; whilst locally, first a swelling of the tube, and then the appearance of a gradually enlarging hæmatocele may be demonstrated. In these attacks the symptoms of acute anæmia may attain to a high

* Vide *Zeitschrift für Geburtshüefe, u. Gynækologie*, Bd. XXV., Hft. 1, p. 58.

degree, but the characteristic feature lies in their frequent occurrence."

I have deemed the result of the researches of this author of sufficient importance to quote at length, because they serve to explain certain phenomena in a satisfactory manner and bring a number of questions nearer solution. When the development of a secondary abdominal pregnancy follows a rupture of the tube, transitory phenomena of a threatening character, supervene consisting of intense pains and attacks of syncope. In the further development of the fœtus, the annoyances of the patient increase more and more, and are evoked by the child's movements. Persistent vomiting is often observed, and there may be recurrent attacks of peritonitis. If the pregnancy attains its normal end, labor-like pains appear that expel a decidua vera, accompanied by slight hæmorrhage, but as a matter of course, do not lead to the birth of a child; but, on the contrary, cause its death in consequence of placental detachment. After the death of the fœtus the ovular sac may contract and the fœtus mummify or lie converted into a *lithopædeon*. In other cases suppuration and putrefactive decomposition of the contents of the fœtal sac take place with all their consequences.

The diagnosis of ectopic gestation may be made with certainty, as a rule, if the patient's previous clinical history be carefully elicited and the result of accurate bimanual palpation invoked as additional aid. If a physician is consulted by a woman who thinks herself a short time pregnant and suffers with intense abdominal pains, should he find the uterus moderately enlarged, the body somewhat laterally displaced, beside it a soft elastic sensitive tumor, a diagnosis of ectopic gestation may be made with a great degree of probability. The softness and elasticity of the tumor are especially characteristic. All other tumors that come under consideration in the differential diagnosis are harder than the fœtal sac of ectopic gestation. This sign, however, is only available when the ovum is living; for it must

be borne in mind that when the fœtus is dead, the tumor has a harder feel. The history of the patient will show at least an irregularity of menstruation. She has missed one or two periods. But as Fritsch truly observes: "To be sure deception is here possible. Tubal abortion may ensue just when menstruation should appear for the first time, or the uterine bleeding that accompanies the death of the ectopic ovum simulates menstruation; nay, blood may escape for weeks—an absolutely certain sign of a dead tubal gravidity."

A very important diagnostic sign is the extrusion of a decidua; when expelled entire it is absolutely demonstrative, but it is often thrown off in shreds and overlooked. In the latter part of pregnancy the demonstration of the existence of pregnancy is easy, but it may be difficult to show that the fœtus lies outside of the uterus. Accurate bimanual palpation will here generally set us right in regard to the true relations by revealing the fact that the uterus is only moderately enlarged and separate from the fœtal sac. In other cases we must have recourse to the use of the sound to ascertain if the uterus is empty or filled. It happens unfortunately, however, that women with tubal pregnancy do not seek medical advice until rupture has already taken place.

The diagnosis of a rupture of a tubal pregnancy with effusion of blood into the free abdominal cavity may be regarded as certain, when suddenly the symptoms of a severe internal hæmorrhage show themselves in a woman whose menstruation, previously regular, has ceased for one or two months, and who considers herself pregnant, and if, in addition, all other causes of internal hæmorrhage may be excluded, and bimanual palpation gives negative results. The diagnosis is confirmed by the extrusion of a decidual membrane from the uterine cavity. The differential diagnosis between extra-uterine pregnancy and pregnancy in the rudimentary horn of a uterus unicornis is simply impossible.

The views of gynæcologists in regard to the *treatment of ectopic gestation* have undergone fundamental changes in the last decade. The general consensus of opinion *now* is that so admirably expressed by Werth, that every extra-uterine pregnancy should be regarded as a *malignant new formation*, and, consequently, be extirpated. No regard should be paid to the life of the fœtus, as the only possibility of preserving it is the performance of a hazardous operation at the end of pregnancy, and meanwhile the mother's life is in constant jeopardy. The ideal aim of our surgical procedures, when the ovum is alive and growing, and without regard to the time of pregnancy, is to remove the entire fœtal sac, in all cases, unless the technical difficulties are insurmountable. In the early months the extirpation of the fœtal sac will not be attended with difficulties, as a rule. After opening the abdominal cavity and finding a case of tubal pregnancy, we ligate the uterine artery between uterus and tumor, and then the internal spermatic (ovarian) in the ligamentum infundibulo-ovaricum between tumor and pelvic wall. The sac is ablated between these ligatures. All bleeding vessels must be controlled by mediate ligation.

In the intra-ligamentous development of pregnancy, we have the same difficulties to encounter that meet us in the subserous development of ovarian tumors. Here, the first act of the operation is identical with that just indicated, and consists in ligating the supplying arteries and then proceeding by blunt dissection, with the finger, to peel the tumor out of its bed in the ligamentum latum. Veit warns us to be careful to avoid wounding the intestine and ureters in these cases. At the end of pregnancy the danger of hæmorrhage is extraordinarily great. The most important steps in the operation are, first, to open the fœtal sac by a free incision, next to extract the child as quickly as possible, and then to control the hæmorrhage by ligation of the supplying vessels. The isolation and removal of the fœtal sac is sometimes attended with exceeding difficulties,

as it is not obvious in which layer we must work in order to separate the sac from investing adhesions, layers of fibrin or folds of the ligamentum latum; the mode of procedure should, however, be the same as that employed in other intra-ligamentous tumors. When the child lies free in the abdominal cavity, the operation is simpler, and consists in the rapid delivery of the child, speedy tying of the cord, and then making use of the umbilical cord as a guide to the point of insertion of the placenta. According to the relations of the sac, whether pedunculated or intra-ligamentous, will depend the procedure now to be adopted.

I should not fail to mention here, that notwithstanding the splendid results obtained by Olshausen, Martin, Werth, Schanta and others, such high authority as Fritsch still insists that when extra-uterine pregnancy has reached full term, we should, on principle, renounce all attempts to extirpate the foetal sac and content ourselves with the removal of its contents on account of the dangers attendant upon total extirpation. According to his technique, the sac is sutured to the peritoneum, so as to shut it off from the peritoneal cavity, and then its cavity is stuffed with sterilized gauze.

In the acute anæmia consequent upon rupture of a tubal pregnancy, it will depend on the result of objective examination whether our plan of treatment shall be expectant or one of actual intervention. If bimanual palpation reveals the existence of a tumor beside or behind the uterus, it shows the formation of a hæmatocele or hæmatoma, and consequently we may safely adopt an expectant mode of treatment. If, on the contrary, one objective examination (bimanual palpation) gives negative results, we may safely assume that there is hæmorrhage into the free abdominal cavity, and should therefore proceed at once to laparotomy and the extirpation of the sac, for here there is no intra-abdominal pressure to hold the hæmorrhage in check. After the premature death of the foetus and the development of a hæmotosalpinx, it may be necessary to extirpate the tubal foetal

sac on account of the severe annoyances to which the patient is subjected. When, however, the retrogressive changes take place rapidly, an operation will be contra-indicated.

The advice of Muret is worthy of attention, to make it our endeavor to preserve the tube, in cases of protracted tubal abortion, with open ostium abdominale, after removing the remnants of the abortion. In the later months of pregnancy, or after it has reached its normal end, the indication will vary according to circumstances. If the general condition of the patient is unfavorably affected, operative intervention will be demanded. So, too, if suppuration or putrefactive decomposition has occurred, the sac is opened, if possible, at a point at which it is adherent to the abdominal wall, and then treated according to known surgical procedures.

As will be perceived, I have only touched upon questions that might be profitably studied at much greater length, but the scope of this paper precludes anything like an exhaustive treatment of the subject, nor is it necessary before such an audience.

Dr. Landon B. Edwards remarked that Dr. James D. Moncure, Superintendent of the Eastern Lunatic Asylum, at Williamsburg, Va., had only a few days ago told him of a case that came under his care of extra-uterine or tubal pregnancy delivered naturally through the uterus and vagina. Dr. Moncure stated that during the early part of labor, by digital examination, he found the uterine cavity very dilatable, but empty; but on one side corresponding to the opening of the Fallopian tube into the womb cavity, he distinctly felt the head of the child filling the uterine mouth of the tube and bulging into uterine cavity. He further traced the progress of the passage of the small head into the uterine cavity and then its natural delivery per vaginam. Where the placenta was attached, Dr. Moncure did not state. He was further satisfied, by examination, that it was not a case of double uterus. Dr. Edwards said that he simply reported the case in brief as it was told him.

Dr. Hugh M. Taylor, of Richmond, Va., noticed that Dr. Harrison had made no allusion to the so-called uses of electricity in the destruction of the viability of an early recognized extra-uterine or tubal pregnancy. He did not believe in the value of electricity himself in such cases; but would like to know what had been the results of Dr. Harrison's experience or study of the subject.

In conclusion, Dr. Harrison remarked that he was very much interested in the report of the case of extra-uterine pregnancy by Dr. Edwards. In his opinion, however, it was not a case of ectopic gestation at all, but of pregnancy in one horn of a uterus bicornis.

He would reply to Dr. Taylor's remark, that he had not inadvertently omitted mention of electricity; that he intentionally made no allusion to electricity, as he did not believe in its employment, for even after the death of the ovum the patient might perish from effusion of blood into the tube and subsequent rupture.

ART. II—The Care of the Skin.

By JAS. C. MCGUIRE, A. M., M. D., of Washington, D. C.,

FORMERLY LECTURER ON DERMATOLOGY AT THE HOSPITAL SCHOOL OF MEDICINE,
LOUISVILLE, KY.; DERMATOLOGIST LOUISVILLE CITY HOSPITAL, ETC.

That we may better appreciate the importance of the proper care of the skin, it is well to know something of this, one of the most important and complex organs of the body.

It is practically divided into two parts—the outer, cuticle, scarf-skin, or epidermis, and the deeper true skin, or corium.

The epidermis is subdivided into the corneous layer, composed of flat, lifeless, colorless cells, and the malpighian layer (so named from the anatomist Malpighi) of irregular-shaped cells, developing to replace those of the outer layer that have been cast off. It is these cells that contain the coloring matter that causes the difference in hue in the European and African. The true skin or corium (from the

Latin *corium*, leather), is divided into the outer papillary layer, made up of little elevations called papillæ, intended to give a greater amount of surface. It has been computed that there are about one hundred and fifty millions of these over the whole body. Below this is the reticulated layer (from the Latin *reticulatus*, net-like or latticed), made up of elastic interlacing fibres, the meshes of which become larger and larger, until we reach the subcutaneous tissue, which connects the skin to the parts beneath.

The corium is well supplied with blood-vessels, lymphatics, nerves, glands and hairs. The arteries from below send off little capillary loops, which ascend in the papillæ, then descend to become veins; they are called capillaries, (from the Latin word *capillaris*, like a hair)—they are so small and slender. Some of the nerves send off prolongations that become lost in the deeper cells of the epidermis. Others enter the papillæ, to wind around and penetrate little bodies called tactile corpuscles. There are two varieties of glands—the sudoriparous and sebaceous. The former derives its name from two Latin words, *sudor*, sweat, and *pario*, I produce. They are made of tubes twisted in the form of a coil in the lower part of the corium, with a duct, ascending through the entire thickness of the skin, to open upon its surface. They are most numerous upon the palms of the hands; where there are about two thousand seven hundred to the square inch, or about two million three hundred and eight thousand over the whole body—an entire length of secreting tubes of two and one-third miles.

The sebaceous glands are made up of a mass of lobules, with a tube that usually enters a hair follicle. The hairs are regarded as modified epidermis. Almost the entire skin is provided with these appendages, except the palms, soles and some other parts. They receive their nourishment and growth from the hair papillæ, which they surround in the corium; occasionally they spring from the sides of the hair follicle; the total number in an average head of hair is said to be one hundred and twenty thousand. They are elastic, stretching about one third their length, about one

four-hundredth of an inch thick, and will support a weight of two and a half ounces.

Sir Erasmus Wilson has reported the case of a young woman in whom the hairs covered almost the entire surface of the body, and were thick enough to conceal the skin. Cases are reported in which the beard grew to the length of seven or eight feet. The hairs of the beard grow at the rate of about six inches in one year.

As to blanching of the hair in the course of a few hours, there are but few well-authenticated cases. In one mentioned in Flint's *Physiology*, the hairs turned white in the course of the night in a patient under observation in a hospital. The blanching is caused by the accumulation of air in the medulla and cortex of the hair. There is no diminution in the amount of pigment.

The nails, like the hairs, are derived from the epidermis. They are imbedded in the skin at their lateral and posterior margins. The part under the nail is called the matrix, from which it grows. The semi-lunar shaped portion, near the root, is called the lunula. It is paler than other portions of the nail, on account of having fewer blood-vessels. Erasmus Wilson refers to a few "golden rules for the care of the nails. They should not be cleaned with any instrument whatever except soap and the nail brush, with an occasional use of the knife or scissors, to the free end, and an ivory presser to the scarf-skin at the root; when they are stained or discolored, a little lemon juice is the best corrective."

So much for the anatomy of the skin. It is usually regarded simply as a covering for the parts beneath, and to give shape to the form; but, as has been seen, it has functions peculiar to itself. It is an *organ of sensation*—especially of touch. This sense can be cultivated to a wonderful degree. We may see this exemplified in the blind asylums, where the inmates are taught not only to read, but to study geography, botany and anatomy by means of models through this sense alone. It has been related of a blind sculptor that he could model the most perfect likeness, simply by touch-

ing the face; and of others who could even tell the color of objects in the same way.

The subject of *cutaneous absorption* is of interest, not only as a physiological fact, but from a therapeutical standpoint. A substance that has been applied to the skin, and is capable of being absorbed, is taken up by the orifices of the glands and follicles, and between the cells of the epidermis. According to Professor Liebrich, corrosive sublimate salve, one to one thousand, made up with lanolin, if rubbed into the skin, is so rapidly absorbed that the characteristic metallic taste, due to the absorption of the mercury, will be noticed in a short time.

As an organ of *secretion*, sweat is constantly poured out in the form of insensible perspiration—in amount, about two pints or pounds in twenty-four hours. It has a saline taste, and alkaline reaction. Composed almost entirely of water, it regulates the temperature to a great extent by the amount that is secreted. In the functional disorder of the sweat glands, known as *bromidrosis*, it has an offensive, disgusting odor, that will render a patient not only a burden to himself, but repugnant to every one with whom he comes in contact. It is said of Henry IV., of England, who suffered from this affection, that the ladies of his court would faint from the offensive odor when in his presence. Professor Hammond relates the case of a woman who exhaled the odor of violets during an attack of hysteria. In another functional disorder of the glands, known as *chromidrosis*, it may be colored black, blue or red, or it may become phosphorescent; the body then becomes luminous in the dark.

The secretion from the sebaceous glands, known as sebum, is a semi-fluid substance containing 50 per cent of fatty matter, and is intended to give softness to the skin. The so-called “flesh-worms,” or “grubs,” are really masses of sebum which clog up the follicles; the little black-heads are caused by an accumulation of dirt and pigment.

Considering the important functions the skin has to perform, and the harm that will result from the non-perform-

ance of these functions, the importance of its proper care can hardly be overestimated. It is true that "beauty usually produces love, but cleanliness will preserve it." Cleanliness is absolutely essential to the correct performance of the functions of the skin and the preservation of the general health; the dust, secretions and the cast-off epithelial scales must be removed by frequent washing. This brings us to the subject of *baths and soaps*. The ancients indulged more freely in the bath than is the custom with us; the Romans, especially, fully appreciated the pleasures and necessity of the bath, and indulged in it to excess. They erected magnificent buildings, supplied with all the requisites for hot, cold and vapor baths; from the ruins, as we now see them, we can form but an inadequate idea of their splendor; buildings, including libraries, gymnasiums and baths were free to the public. Women have endeavored to beautify their skin by bathing in milk and scented waters. To such an extent was this carried in Paris, at one time, that there was great scarcity of milk for the table. I know of a well-known prima-donna who uses a quart of cologne in each bath.

I do not consider the daily application of the full-length bath for hygienic purposes necessary. Twice a week is sufficient to cleanse the skin of all external debris; more frequently than this is simply a luxury. The average Englishman would rather part with his tooth-brush than his tub; his solicitous care of it is amusing; it must always be with his luggage; he will bring it across the Atlantic; will take it to the wilds of Africa or to the plains. Why, can he go to any place where he cannot procure a better bath than his "tub" can afford? but—"well, you know, it is so English." While traveling on the Northern Pacific railroad, Montana Territory, some years ago, I heard an Englishman ask the baggage-master for his tub, that he might indulge in a bath while the train waited half an hour for dinner. When it was refused him, he simply abused the blasted country, went to a neighboring hotel and took his plunge in the public bath tub; as the train moved off he

ran after it, completing his toilet as he ran. He was either a very cleanly person or an extremely dirty one.

Not only is the daily full-length bath unnecessary; it is harmful in many cases, depriving the skin of its natural unction, rendering it rough and liable to take on an eczema in those who are predisposed to this disease. The Turkish bath has done as much harm as good; it is of benefit, however, in some cases to stimulate the skin and thoroughly remove all external debris; in this respect it cannot be surpassed.

The hands, face and neck should be washed at least twice a day, and such confined portions of the skin as the arm-pits, once; the whole body twice a week, as I have already said, is all that is necessary. It should be known that there are certain diseases of the skin, such as eczema, to which water is absolutely poisonous; cases of this disease may at times be cured by simply protecting the part, and not allowing water to come in contact with it. After a cold bath use brisk friction, with a towel, not only to further cleanse the skin, but to excite the cutaneous circulation, and so draw the over-supply of blood from the internal organs. Those suffering with heart troubles should abstain from the hot bath, as the heat will cause a determination of blood to the surface and so deprive the heart of its natural supply.

Soap may be defined as the product of the action of alkalis upon refined oils or fats. If the alkali is soda, the result will be hard soap; if potash, it will be soft. Soaps are of three kinds: Alkaline, when there is an excess of alkali, rendering it more or less caustic; neutral, when the alkali and fat are supposed to be exactly balanced, and the over-fatty. Their efficacy depends upon their power of rendering the natural unguent of the skin and debris soluble in water. The soap is decomposed and gives up part of its alkali, which unites with and removes this debris from the skin; the rest of the alkali dissolves the particles of epidermis that have performed their functions and are ready to be cast off. Only the best soap should be used for the toilet—that is, those that are unscented and transparent, for

the foreign admixtures may irritate a sensitive skin; they should not contain an excess of alkali, and the fat should be pure and sweet. Probably the best is either the white castile, made with the best olive oil and soda, or Pears' unscented transparent soap. As to medicated soaps, they are, as a rule, valueless, for the quantity of the drug taken up is very small; it is in contact with the skin too short a time; the amount cannot be measured or its purity guaranteed. They should never be used without the advice of a physician.

There is a popular error that soap should not be used upon the face. There is no good reason for this belief; in fact, it is more important on the face than elsewhere; not only is the face the most exposed portion of the body, but there is a greater amount of secretion here than elsewhere to catch the dust.

It has been said that country girls wash their faces with soap, and do not have acne; city girls abstain from the use of soap, and do. Though this is exaggerated, I have met with cases that have been aggravated by neglect of this part of the toilet.

There is an old saying, "Women who paint their faces to seem beautiful do clearly deface the image of their Creator;" and yet they will frequently resort to any means that hold out the least hope of improving their complexions, such as plastering their faces with paste, enameling, binding it in raw beef, and even wearing medicated masks. The purpose of most of these applications is simply to conceal repulsive blemishes, which, in the majority of cases, could be readily removed by appropriate treatment. Such methods can only do harm: for if they do not directly injure the skin, they make it tender, and much more apt to be affected by external agencies. To make their hands white and bloodless women have been known to spend the night with them suspended by means of pulleys.

I am frequently asked, are dusting powders harmful? Most of them are, for they are liable to contain lead, bismuth or other deleterious ingredients. Plain starch, mag-

nesia or corn starch farina are the least harmful. I advise against the use of any of them, as they will clog up the openings of the glands, and so are apt to prevent them from performing their proper functions. If the face is abnormally greasy, a little sulphate zinc, in water and alcohol as a lotion, will be found of benefit.

Hair Dyes.—As a rule these dyes will not act injuriously, except when they come in contact with the scalp itself, when they may cause some irritation. Black color may be produced by painting in a solution of nitrate of silver, and then exposing the hairs to the sunlight; to avoid staining the surrounding skin, it may be washed with a solution of common salt. Professor Kaposi mentions a hair-dye that has been in use very generally in the East, among the Persians. It will produce all shades of color, from a light brown to dark black. "The remedy consists of the powder of the dried henna plant and of the powdered indigo plant. The first powder is formed into a thick paste, by means of water, and spread on the hair; after the lapse of an hour this appears of a red color. A paste prepared from the powdered indigo plant is then spread on the first. Under the influence of warmth and moisture, the black color becomes apparent on the hairs, covered with these two pastes, in the course of several hours. We have seen, even in the experienced hands of Dr. Pollak, a color produced which was some degrees removed from what was desired." Before beginning the use of hair dyes, read the experience of Tittletat Titmouse, in Warren's "Ten Thousand a Year."

Hair Restorers.—The Massachusetts State Board of Health has had a large number of so-called hair restorers, now in the market, analyzed. It was found that all that was examined contained lead in varying quantities. For *falling of the hair*, our chief reliance must be in the use of local stimulating applications. Equal parts of tincture of cantharides and bay rum is an excellent application; it will not blister the scalp. The confidence with which a bald-headed man will use a hair restorer, recommended by a bald-headed barber, has been referred to as a sublime ex-

ample of faith cure. It is of especial importance that the hygiene of the hair shall be looked after—that is, the proper use of the shampoo, brushing, exposure to air and light, cutting and shaving, and in the use of pomades. *Shampooing* should be resorted to about once a month. The best shampoo is made of equal parts of saponis viridis and bay rum; it should be about the consistency and color of sherry wine. As it is frequently made up in the shops, it is a dark, thick fluid, caused by the use of an inferior quality of soap. The mistake should not be made of applying the shampoo to the hairs alone, but the hairs should be separated and the liquid dropped upon the scalp, here and there, and then with the use of a little water rubbed thoroughly for five or ten minutes. Usually the shampoo is not applied with sufficient vigor. The hair should be dried and an ointment, such as sulphur, one drachm to the ounce, applied. *As to brushing*, a good stiff *brush* should be chosen, such as recommended by Dr. Jackson. "A properly made brush has its bristles placed in little clumps or groups in such a manner that the little bristles of each group are larger than those of the periphery. The bristles are well set into the back of the brush and the groups are wide apart." With such a brush the hair can hardly be brushed too much. Not only should the fine-tooth comb be interdicted, but any form of comb is bad for the scalp; it is not necessary, as the part can be just as well made by means of two brushes. Wigs and false hair heat and sweat the scalp, and deprive the hairs of the sunlight and air which are necessary to their healthy growth.

Hirsuties.—Women suffering from an abnormal amount of hair will resort to any means to get rid of this blemish. They usually shave or extract the hairs, but this only acts as a stimulant to renewed growth. So-called depillatories are worse than useless; they contain ingredients that have the power of dissolving the hair; but, if we remember the anatomy of the skin, it is evident that it is impossible for them to reach the papillæ, from which the hair receives its nourishment, without destroying the whole thickness of the

skin. The only means by which the hairs can be permanently removed is the method resorted to by dermatologists, known as electrolysis. A fine needle is inserted into the hair follicle down to the papillæ, which is destroyed by the passage of an electric current from the negative pole of a galvanic battery. Five thousand hairs have been removed from a lady's face by this means, resulting in permanent relief of the trouble.

Lotions for the toilet, as found in the shops, are liable to contain mercury. This may be absorbed and produce symptoms of constitutional poisoning. What is known as "flake white" is made by mixing carbonate of lead with rose water. Cases are not infrequently reported of women, who have been poisoned, showing symptoms of the constitutional effects of the lead. Some of the symptoms are delirium, abdominal pain, a peculiar drop of the wrist, and a characteristic blue line along the edge of the gums.

Some Popular Errors in Regard to Skin Diseases.

Though many of our colleges completely ignore the study of dermatology, the leading universities have awakened to the fact that it is a subject not to be neglected, and examinations are now even made compulsory. It is just as important to make a correct diagnosis between an eczema and psoriasis as it is between scarlet fever and measles, variola and varioloid. It is presumable that the study of cutaneous diseases is neglected to such an extent on account of their unimportance; but in refutation of this, one has only to refer to the literature of the subject; to such books as Hebra's *Diseases of Skin*, in five volumes, of three or four hundred pages each; to recall such names as Hebra, Kaposi, Neuman, of Vienna; Sir Erasmus Wilson, Tilbury Fox and Addison, of England; Bulkley, G. H. Fox, Morrow, Piffard, White, Hyde and a host of others in this country—men who have devoted their life-study to this subject and who have no superiors in any branch of the medical profession.

Familiar appellations for skin diseases are not confined to the laity. The most diverse, ridiculous and unmeaning

terms have been applied to these affections, such as *tetter*, that usually refers to eczema, or may mean psoriasis or lupus. *Bakers' itch*, *grocers' itch*, *milk crust*, *tooth rash*, are also used to designate some form of eczema.

Liver spots may refer to chloasma, a pigmentary affection, or to tinea versicolor, a vegetable parasitic disease.

The itch, to scabies, a disease caused by an animal parasite, known as the *acarus scabiei*. The expression, *army itch*, would lead one to suppose that it was distinct from scabies, yet we recognize it as the same disease.

Blood boil has no scientific meaning and is applied to various diseases.

Hives is recognized by some as urticaria; by others as varicella (chicken-pox).

Shingles means herpes zoster, an acute disease, characterized by an eruption of groups of vesicles upon an inflamed base along the course of certain nerves.

Prickly heat usually refers to a disease known as miliaria, an affection of the sweat glands.

Dandruff, to the dry form of seborrhœa of the scalp.

Black-heads (*flesh-worms*), to comedo, a collection of sebaceous matter in the distended sebaceous glands. The little black-heads are caused by the accumulation of dust and pigment.

Ringworm is a vegetable parasitic disease, caused by the trichophyton fungus, and is known as trichophytosis.

Barbers' itch is caused by this same fungus upon the bearded portion of the face, and is designated by the term tinea sycosis.

Fish skin disease is a congenital affection characterized by dryness and scaling of the skin. Its proper name is ichthyosis.

Chap is usually a mild form of eczema, attended with cracking of the skin.

As to the etiology of skin diseases, how often we hear the expression, *bad blood*. Has this term any meaning? If it has, it must mean a depraved state of the blood that can be recognized by chemical re-agents or by the microscope;

but Professor Bulkley says "chemical and microscopical studies fail to show there is bad *blood* in any of the diseases of the skin. It is supposed the impurities in the *bad blood* find exit through the skin, and in so doing take the form of an eruption; consequently it is harmful to remove them. Patients frequently express themselves as very solicitous about the sudden cure of a skin disease. The consequence, in their opinion, might be disastrous by the *driving in* of a disease that might attack some internal organ. Nothing could be more absurd, for it is absolutely impossible, in this sense, to either drive in or drive out a skin disease. The blood has little to do with these diseases. There are affections as peculiar to this organ as to any other, entirely localized, depending upon changes in the tissues themselves. Others are caused by parasites; still others by nervous disturbances. It is evident that the much-lauded *blood purifiers*, for cutaneous diseases, are, to say the least, useless. A patient may get well while taking these quack nostrums; the fact is then extensively advertised. This is about on a par with the announcement of lottery companies of the fortunate individuals who have obtained prizes. The tens of thousands who are not so fortunate are never heard from.

The majority of skin diseases are regarded as contagious, and the fear is expressed that those who come in contact with the afflicted are liable to become affected; but this is far from the truth, for out of the hundred and more diseases that may affect this organ, only two or three, besides the parasitic diseases, are really contagious.

As there are so many popular errors in regard to cutaneous diseases, the following *aphorisms* may be of some interest. The statements are made either upon the evidence of well recognized authorities or as a result of my personal experiences:

I. You cannot be successful in treating diseases of the skin without a thorough knowledge of general medicine. This, I think, will be accepted as a self-evident proposition.

II. You cannot cure them too quickly.

III. If they are cured they will not act deleteriously upon any internal organ. Hebra says: "Our warmest endeavors are to find means of terminating these diseases as speedily as possible. Were we only in possession of remedies which produce cures thus rapidly we should have no anxiety in regard to the appearance, from this cause, of metastasis, or of any other consecutive disease."

IV. Arsenic is not a specific for cutaneous diseases; in fact, it is less frequently used by those who have made a special study of these diseases, than by the general profession.

V. You cannot drive in or drive out diseases of the skin. "At this day no educated physician believes in employing medicine with a view to either the so-called 'driving out' or 'driving in' of a disease of the skin."—*Hyde*.

VI. The great majority of these diseases, contrary to the general idea, are not contagious; only one or two, besides the parasitic diseases, out of the hundred and more that may attack this organ.

VII. Freckles are not always produced by the sun's rays. Cases are reported where they have appeared upon the portions of the body of young girls that have never been exposed to the direct rays of the sun.

VIII. *Tinea tonsurans* (ringworm of the scalp), does not occur in adults, though Tilbury Fox has reported one such case. If it ever occurs it is extremely rare. Neither Duhring nor Piffard ever met with a case.

IX. *Tinea versicolor*, another parasitic disease, does not occur in childhood. "Children are exempt."—*Weyl and Gaber*. Neither Duhring nor Liveing ever saw a case.

X. *Acne* does not occur in childhood. Mild cases of this disease are not the easiest to cure.

XI. *Chloasma* (liver spots) never occurs before puberty. The disease is not caused by diseases of the liver.

XII. Bromidrosis does not necessarily mean bad-smelling sweat. The odor may be that of violets or pineapples.

XIII. Scabies and *tinea versicolor* do not appear upon the face of adults.

XIV. Eczema marginatum is not an eczema, but is a parasitic disease.

XV. Leprosy, as we now understand the disease, is not described in the Bible. Leprosy is not as dangerous to the community as tuberculosis, according to Beaven Rake, Superintendent of the Trinidad Leper Asylum. It is not proven that the disease has been conveyed by vaccination.

XVI. You cannot cure an eczema (tetter) by internal treatment alone. Hyde says, once fully persuaded of this important truth, the physician should be capable of managing the complaint without mental bias.

XVII. Do not apply water to an eczematous surface, as a rule; it is poisonous to acute eruptions.

XVIII. Do not expect the same effect in different persons from the same prescription; that which is of benefit in one case may aggravate an eruption in another.

XIX. Do not use a sponge in making applications to the skin. It cannot be kept clean and pure.

XX. Depilatory remedies cannot permanently remove the hairs without scarring the skin.

XXI. Pruritus does not simply mean itching as a symptom; it may refer to an idiopathic disease that is known by that name.

XXII. Bad blood is not the chief cause of cutaneous diseases; according to most authorities it can hardly be classed as an etiological factor.

XXIII. Scales and crusts are not synonymous terms.

XXIV. Drug eruptions are not due to "salivation of the system" with the drug. A few grains of iodide potash may cause an eruption as well as a hundred.

Idiosyncrasy has been defined as an individual peculiarity which renders one susceptible to certain effects not produced in others. In this way, every one is susceptible to certain ill-effects from certain foods; therefore, those things which your stomach has taught you it will not digest, should be avoided. Shell fish, strawberries, oatmeal, etc., have been known to produce urticaria. Confectionery may aggravate an acne or an eczema. It is well to remember to

keep the teeth in good condition ; to have regular hours in partaking of food ; not to eat to excess ; never to dine alone ; to eat slowly and chew thoroughly. Though it is impossible to lay down any fixed precepts of diet, there are certain articles that should be avoided by those suffering with cutaneous diseases.

Permitted.

Water plentifully *between* meals ; cup very *hot* water before breakfast ; small amount bottled table water at meals ; one cup of coffee or tea, well diluted, for breakfast ; milk *ad libitum* if it agrees.

Fresh fish and raw oysters ; beef, lamb, mutton, chicken, turkey, fresh game, boiled eggs.

Cooked vegetables and fruit in season ; cold bread, toast and crackers, crushed wheat, hominy and rice.

Tobacco in moderation to those accustomed to its use.

To Be Avoided.

Stimulants, especially fermented liquors ; all beer, wine, cider, etc. ; all fried articles : salted meats, pork, veal, lobster, cooked oysters, crabs, eggs, except boiled, sausage, potted meats, rich gravies and soups, uncooked vegetables, cabbage, corn and turnips, pastry, confectionery, preserves, nuts, cheese, rich salads, pickles, desserts, hot bread and cakes, melted butter and buckwheat cakes.

818 17th Street, N. W.

ART. III.—Resection of the Rectum for Prolapse—Neoplasia in the Left Axilla—Pleuroplastic Operation for Costal-Fracture and Empyema.*

By Dr. THOMAS H. MANLEY, of New York, N. Y.

The first case on which we will operate to-day is a woman who briefly gives the following history : She is forty-six years old. She comes in to be treated for piles or prolapse. She has been operated on thirteen times before for hæmorrhoids in London, Dublin, Paris, Boulogne and Philadelphia, besides once in this hospital by myself. She says that her father was a sufferer from the same malady, and that no operation yet performed has given more than six months' relief before rectal distress returned. Every sort of technique has been employed on her without anything more than temporary relief. I want to emphasize this feature of her case,

* A Clinical Lecture delivered at Harlem Hospital, October 4th, 1893.

because it goes to support my own position, viz: that no operation known to art will always effect a permanent and enduring cure in all cases of hæmorrhoids.

We may cut the piles away, strangle, burn or ligate them, but we don't touch the *fons et origo*—the predisposition. Therefore, why that operation which will effect their eradication or relief without mutilation, is the one which should be always preferred.

In this instance you will observe that there is not only an extension of hæmorrhoids, but there is also a considerable rolling out of the rectum. This latter has greatly increased in volume, so that now it is quite impossible for her to sit down with comfort.

We will treat the case by a circular resection of all the slack outside the verge and go up inside about two inches, then we will bring down the upper divided edge of the intestine to the cutaneous border, at the external sphincter and close in the hiatus with two independent rows of catgut on the inside and silk suture on the outside.

In resection of the rectum in women we should cautiously detach the anterior wall of the intestine, in order to avoid making a fistulous opening into the vagina, which in many elderly people is separated from the bowel by a very thin partition of cellular tissue. As this part of the body is very vascular and liable to septic pollution, it is necessary to be well prepared for hæmorrhage and to guard against wound infection.

The operation is tedious and bloody, though entirely successful—consuming more than half an hour in its performance.

Our next case is a young woman who comes to us from the dispensary. So far an exact diagnosis of her condition has not been reached.

You will notice that there is a large fullness occupying the left axillary space. She says that it has been six months in forming, and that now it is constantly painful and seriously interferes with the motions in the arm.

The pulse on this side is much more feeble than on the opposite side. The artery transmits an impulse to it, though the aneurismal thrill and souffle are absent.

You see, it is lodged under the pectoral muscles, and its lower border extends down below the insertion of the latissimus-dorsi. To the feel it is movable, in any direction, to a slight extent. There is no distinct sense of fluctuation.

Now, what is this mass? It is important that we answer this question before any sort of operation is undertaken.

Is it malignant disease? I think not. She is but thirty years old, and there is no infiltration of the neighboring glands.

Is it a tubercular adenitis undergoing suppuration? She has never had specific disease and has never been married. There is no temperature to indicate fever. However, she has a pallor of the general integument and a flush of the cheeks suggestive of struma. There are no physical evidences of pulmonary disease.

Now, let us put the case to the crucial test and try the exploratory needle. By this means you see the mystery is cleared up; you see the barrel of the syringe fills with pus. The case, then, is one of suppurative disease of the axillary lymphatics. What has masked its real character has been its enormous size, its slow development and the absence of fever.

We will make a free incision, thoroughly curette away all the tubercular foci and close the wound up at once, without any drainage.

The next case is one of a man who, several months ago, fractured his seventh, eighth and ninth ribs at third greatest convexity by a fall, while intoxicated, on the left side. He has had syphilis, and is dissipated. Suppurative pleurisy followed, with necrosis of the fractured ends of the ribs; and, as you see, nature has made an effort to rid herself of this accumulation by making three fistulous openings through the side. Through these a probe comes in contact with the softened, broken down osseous tissue of the ribs.

My operative intervention will consist in making a complete resection of the diseased bone; at the same time cautiously guarding the costal periosteum, open and cleanse the pleural cavity, then stuff the hollow left by the evacuated pus. Now that considerable of the costal shafts have been cut away, the dead space in the pleural cavity will fill in by a collapse of the ebonated parietes of the thorax at the site of suppuration.

This trouble originated wholly in a traumatism, and there are no signs of constitutional implication. No doubt the

thick pyogenic membrane so walled out pyæmic material that the penetration of infective germs into the circulation has been rendered impossible.

The operation is not attended with much loss of blood, and every detail of operation will be carried out with the utmost precision.

ART. IV.—Treatment of Post-Partal Pelvic Inflammations.*

By J. FOSTER SCOTT, B. A. (Yale); M. D. and C. M. (Edin. Univ.)
Washington, D. C.

OBSTETRICIAN TO COLUMBIA HOSPITAL.

Some degree of pelvic inflammation is apt to follow every normal delivery, every abortion, every missed labor, and, indeed, every puerperal condition which does not run a surgically clean course, without rise of temperature or offensive lochia.

According to the course and the severity of the inflammatory condition, life may be imminently endangered, or a long history of future pelvic discomfort be initiated by reason of the various forms and degrees of endometritis, salpingitis and ovaritis, resulting in dysmenorrhœa, uterine displacements, ovarian neuralgia, leucorrhœa, sterility, etc. A very frequent and important sequence of septic trouble will be an anæmia, which often seems to be pernicious in its severity. Anæmia is both a predisposing cause of septicæmia and a result induced, and at some stage of the illness, sooner or later, one of the outstanding lines of treatment will be directed to it.

It will be found that those women are more liable to pelvic inflammations who have ill-developed sexual organs, who have practised tight lacing, who suffer with acute or latent gonorrhœa, who are ill-conditioned and anæmic, who have tubercular disease of the peritoneum or pelvic organs, or who have suffered from intense emotional disturbances—as shame, sorrow or misplaced affections—and such factors as these must be duly recognized for whatever value may

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, November 13, 1893.

attach to them in the early conduct of their puerperia. The severest type of post partal pelvic inflammation results from suppuration of retained secundines or clots. In these cases, during the earlier days of the puerperium, the whole treatment will be directed to clearing out and draining the uterine cavity; but after toxæmia is established, we must, in addition to such surgical measures as may be required, rely largely on stimulating the patient's strength by proper nourishment, tonics and alcohol. Lacerations of the cervix, vagina, perineum or pudenda, or a lowered vitality of the parts from prolonged pressure, almost invariably accompany pelvic inflammations following delivery at term, and cases in which these conditions exist require most careful observation.

Upon the first appearance of pelvic inflammation, it is well to give a saturated solution of sulphate of magnesia, in repeated doses, every two hours, till the bowels move freely. Then let the patient rest for a few hours, and resume the saline treatment until the bowels again discharge a copious watery serum. This measure will deplete the pelvic and abdominal peritoneum and viscera to a remarkable degree, and often be the means of aborting peritonitic or visceral inflammations. The use of saline purgatives in abdominal inflammations has quite superseded the former routine of giving opiates.

In my opinion opiates are nearly always harmful in these cases, on account of their paralyzing effect on the muscular fibres of the bowel. We must, above all things, avoid tympanites and the presence of stagnating fæces in the bowel, if we wish to prevent peritonitis. Opium favors these conditions. In the first stage of inflammatory trouble, if the peritoneal coverings be involved, I advocate almost complete starvation for twenty-four to thirty-six hours, combined with free purgation by the use of salines. I have often been astonished at the rapid subsidence of abdominal and pelvic inflammation, which I attributed to absolute quiet, starvation and the free use of hydragogue purgatives. However, in most cases of post-partal pelvic inflammations,

we will find, by a more or less strict search, a septic condition originating in a denuded surface, either in lacerations of the pudenda, cervix, or at the placental site. Our first care will be to examine these parts most minutely, and to apply, if indicated, prompt means to sterilize and drain the denuded parts.

It is of vital importance to recognize the condition and initiate a line of treatment as soon as sepsis occurs. For this purpose there is nothing which answers so well as a spectacular examination through a trivalve speculum. The sense of smell will aid us, as few cases of sepsis occur in which there is no odor. *There should never be any odor to the lochia; if there is, watch.*

Upon evidence of sepsis we must act promptly with some method adequate to check it.

The patient should be brought with her buttocks to the edge of the bed, and assistants hold her legs in a flexed position. The pudenda and vagina are then to be scrubbed with soap and water, and a douche of 1.2000 HgCl_2 given; then a trivalve speculum is introduced, and a search made for the septic area, which will almost invariably be found within the uterine cavity. If the uterine mucosa be in an unhealthy condition it should be swabbed out with pledgets of cotton soaked in H_2O_2 repeatedly at one sitting, and, finally, an iodoform gauze drain left in. This procedure should be done daily until all evidence of sepsis is past.

In some few cases we will have the question of abdominal section threatening us. If there be pus sac we must evacuate it, but, unfortunately, in these cases, the uterus is usually infiltrated with pus to such an extent that, in order to do a complete operation, it is necessary to do an hysterectomy. In my experience it seems hopeless to attempt the removal of the entire disease in most cases. All that we may be able to do will be to evacuate the pus collections and drain. The kidneys are so often infiltrated with pus in those cases requiring operation as to make one very conservative about operating.

The urine should be frequently examined in these cases

for albumen or vibriones. If there be a bacilluria, the bladder is to be irrigated daily with a weak solution of boracic acid, permanganate of potash or per-oxide of hydrogen and diuretics freely given.

In conjunction with the above line of treatment, we must give a generous diet and tonics, such as quinine, iron, tr. strophanthus and tr. digitalis.

1311 Connecticut avenue, N. W.

ART. V.—Typhoid Fever—Other Causes than Drinking Water and Milk.*

By WM. T. WALKER, M. D., of Lynchburg, Va.

Writers seem agreed that typhoid fever is a *zymotic disease*, and that there is a certain *fermentative agent* at work in the human system which crushes the train of evils which are sure to follow. There are at least two other diseases which belong to this classification—remittent fever, in its various forms, and variola. These two diseases, almost twin brothers of evil, have been shorn of their locks and are now subject to *preventive treatment*. True, the agents through which the ravages of these diseases were staid, come to us through channels of accident or ignorance rather than those of science. Yet, the diligent seekers after medical knowledge have caught the facts, utilized and preserved them, and so extended the life of man and added to the longevity of our race. The use of cinchona, taught us by the unlettered Indian, and of vaccination, suggested to Jenner by the observations of the milk-maids, have wrought revolutions for good far greater than the sword has for evil.

From all that can be gathered from observation and the teachings of others, we are forced to conclude that typhoid fever is indeed a *zymotic disease*; that there is some fermentative agent at work in the system, and which, in order to

* Read before the Lynchburg Academy of Medicine, November, 1893.

be cured, must be met by germicidal treatment in order to develop the surest and happiest results.

True, palliative agents, proper local and atmospheric surroundings, and all accessories conducive to the well being of the patient, must be constantly held and kept in view. But the *other fact* must be kept in view, that we are treating a zymotic disease, and that while the biotic forces, aided by good nursing and health-favoring surroundings, will tend to restoration to health, yet, the great desideratum is to find the germicide, in this disease, as in the two others named, which will overcome the evil causative agent at work.

The *symptoms and course* of this disease are a gradual approach, marked by headache, chilly sensations of irregular return and duration, langour, general malaise, frequently epistaxis, bronchial cough, accelerated heart action and elevated temperature, diarrhoea, and maybe abdominal tenderness; this not always in the beginning. Later, we find more tenderness, especially in the iliac region, with gurgling, and rose-colored spots, but these not always; pulse above normal, fever continues and rises in the evenings, sometimes reaching 104° – 106° , and occasionally higher; sometimes subsiding with perspiration, though often the skin remains dry. Sudamina are often found over chest and abdomen. Hæmorrhage from the bowels, when the disease is at its highest, is often an unpleasant complication. Depressed heart action is an alarming feature, which should be closely watched and actively met. Frequently from early in the disease there is coma, with muttering, sometimes violent delirium. The pulse is elevated, often dicrotic, reaching 120–30. Subsultus tendinum; suppressed urine, hiccough, cold sweats, involuntary alvine discharges, are distressing symptoms later in the disease. Perforation of the bowels, with which the pulse goes down several degrees, is always a distressing complication.

Meteorism—often mistaken for inflammation, itself not an unusual feature—often proves very troublesome. Often we have distressing bed sores and abscesses over various parts of the body, along with great depression and emaciation.

These are some, among many, of the characteristic features of this disease familiar to you all.

There are also many complications and sequelæ, among which may be mentioned pneumonia, generally of hypostatic form. The brain is sometimes involved in inflammatory or high nervous action, and occasionally derangement, generally temporary though sometimes permanent, is found. In the beginning, a characteristic tongue is narrow, pointed, red-edged, harder and rounder than in health, or in most diseases, especially malarial fever. It is at first somewhat coated, and this increases as the disease advances, becoming more heavily covered, often becoming very dry and cracking, even bleeding in severe cases; then, again, it is found glazed and of a deep red color. When it remains moist, as the disease progresses, it may be regarded as a good indication.

The nervous system is often involved to such an extent as to make it the most alarming feature of the disease, caused, as we suppose, by the toxic effect of the peculiar offending agent. The respiratory system is also involved to greater or less degree, as well as the renal and biliary.

No age escapes its ravages; yet, it is most frequently found in youth and mature manhood or womanhood, for the sexes are alike affected. While the whole man is affected by this disease, yet the glandular system is most involved. When the parotid glands become involved, recovery is very rare. I only remember to have seen one case of recovery.

Morbid anatomy teaches us but little more than the fact that the glandular system, especially of the lower intestines, is chiefly involved, along with the glands of the mesentery, and that the spleen, always involved, sometimes deeply complicated, is broken down by gangrenous abscesses. The heart, the liver, and the kidneys also undergo degeneration—in many cases. But chiefly hyperplasia of the glandular follicles, accompanied with necrosis and sloughing of the mucous coat, sometimes involving the muscular and peritoneal of the ileum, indicate the presence of this disease.

while other portions of the bowels are also often involved, as well as of the respiratory organs.

Diagnosis is of the greatest importance. *Typhus fever* is so seldom seen in this section, that it is scarcely necessary to consume time in pointing out a differential diagnosis.

Incipient phthisis has in the beginning some features in common, but the history of the case and the general appearance of the patient, together with the early pulmonary complications, soon satisfy the medical attendant.

Puerperal fever, similar in some respects, is made manifest by its history. With *remittent fever*, there are many points of resemblance, but the higher grade of the fever here, and the tendency to remission, mark the difference. Moreover, the treatment with quinine speedily gives improvement in the one, while no benefit follows its use in the other.

Typho-malarial fever is now regarded by most writers as a conjoint action of the two diseases, malarial and typhoid fever, at the same time, and not an individual disease, which may affect the diagnosis; but here, again, the use of quinine soon puts an end to the malarial features. Two distinct diseases may attack the human system at the same time; of this we have many examples. There is an atypical form of continued fever, mild in character, from which it must be diagnosed.

Causation.—The disease is of germ origin. In the act of embalming the dead, the ancients used a germicide, which destroyed the germ of destructive putrefaction; and the skin worms, which Job knew would destroy his flesh, and which were *already* in the system, were staid in their work by the material *germicide* agents used for the preservation of the body from destruction. And now, in our day, the effort to check putrefaction and preserve the body from decomposition is revived. Modern antiseptic surgery is practiced most successfully upon the idea of the destruction and exclusion of germ agents, and where successfully applied, the results are most satisfactorily; and as in embalming the dead and destroying the germ, so here we find that among the many

agents used for this work, *bichloride* of mercury stands foremost.

Again, the ancients taught that in order to preserve slaughtered meat from putrefactive destruction, the chloride of sodium should be used; and so by simply salting meat, the destructive germ which was consuming it is at once destroyed. So we see that germicides have been used in all the past and at present, both in the dead and the living body. Diseases are cured by germicides—dead bodies are preserved by them.

Eberth, Klebs, and others claim to have found the *bacillus typhosis* only in this disease, while Wernick believes this to be the same as *bacterium coli commune*, found at all times in the large intestines, which, under certain circumstances, accommodates itself to the small intestines, penetrates them, and passes to the mesentery and elsewhere. In a word, the Germans believe the *bacillus typhosis* is the real cause of this disease; while the French think the *bacillus coli communis*, usually present in the intestines, under certain circumstances acquires especial virulence. Thus, according to the one, the drinking of sewage will not cause typhoid fever unless this be contaminated by the specific *bacillus* of typhoid fever. According to the other, the drinking of contaminated water, especially by the excreta of man, is dangerous, and may be followed by typhoid fever. These views all leave the matter of the cause in doubt.

Probably the truth may lie along *this line* of thought—that most of us are liable to this disease; that filth, sewage, and other unsanitary surroundings, with their noxious exhalations and excretions, are not the *true parents*, but the *nurses* of these *germs*, and that under accidental or favoring circumstances they are caused to grow and reproduce. Too much importance cannot be given to the statements of Prof. Victor Vaughan and others, that they have found *numerous germs* that bear a causative relationship with typhoid fever.

Is this disease contagious? If we are all liable to the disease, if it springs from real organisms, air borne, or water

borne, or taken even upon food, the just conclusion is that it may be communicated under favoring, developing circumstances. That many escape, is no argument against the danger. There may be other modes of conveyance, but by agreement the most common one is believed to be by the drinking water.

Passing over many points of interest in connection with this interesting subject, we come to the *vital one*. What should be the *treatment of this disease*? Here the etiology of the disease meets us on the threshold. If it be a truly *zymotic disease*, like malarial fevers, influenza, and many others; and if produced by a miasmatic cause, probably a vegetable organism, then the conclusion is reached that these organisms furnish pabulum for microscopic animalculæ, already in the system, in the blood, or elsewhere, or conveyed into it by external causes, and awaiting a favorable combination of conditions, surrounding circumstances, and nourishment, for their development and reproduction.

The effort of nature is to health; the biotic forces work to the accomplishment of this object, and seek to throw off all noxious agents, all toxic material, from whatever source. Let us aid this by whatever means we can command. If we cannot quell the storm, let us seek to guide the ship; let us endeavor to put the system into the best possible condition.

Let the alimentary canal be cleaned out by sufficiently active aperients; the nervous system quieted by palliatives; the heart-action carefully watched, and not allowed to become excessive or unduly depressed; the various organs, as the liver and kidneys, made to perform their proper functions of secretion and depuration, and let all the surroundings be of the most hygienic character. Let the ventilation be thorough, and constantly watched over, so that at all times there may be a health-giving *air-bath* over and around the patient. Let the temperature be constantly observed, so that the fever be not allowed to consume and burn up the vital forces. In order to do this, let water be used freely

by the patient, and ice, if you please. Let the body be carefully sponged, and frequently too, with water, or water and vinegar. The cold pack may be used with advantage, or water may be applied by effusion, or *the bath*. In a word, let everything be done to keep the temperature at a point which shall not be consuming.

In order to aid in this, many remedial agents may be used. Antipyretic remedies may be carefully given with advantage. Morphine, preferably hypodermically, may, when required, be given to quiet the nervous excitability; while strychnia is used to guard the heart's action, and to overcome the depressing toxic effect of the poison of the disease. To aid in this, alcoholic stimulants also should be used—the quantity to be measured only by the effects produced and the objects accomplished. At the same time, and all the while, only the most nourishing, not irritating, easily digested food, should be allowed, but of this enough should be constantly given to nourish the system, remembering all the while that a consuming fire is wasting the vitals.

Foremost among articles of diet stands milk, probably rendered more satisfactory by lime-water or pepsin, and, when required, the meat juices, extracts, and other concentrated, non-irritating articles of food, may be added as the disease advances. Kumysgen is well recommended. But *all these*, and many others, which will suggest themselves to the thoughtful practitioner, are only, as it were, health-giving surroundings.

Are there no remedial agents, no germicidal agents, which may be used in this disease, as quinine is to antidote the poison of malaria, as vaccination is done to overcome the susceptibility to variola?

Many contend that there are; some point to the chlorides of mercury; some to iodine, carbolic acid, and chlorine; some to salol as an intestinal germicide. Wood taught the use of turpentine, and wisely too; and others the various preparations of ammonia, thinking that in the various salts of ammonia are found agents, suited, not only to meet the

symptoms and features of this disease, as they occur, but that they all, especially the chloride, are germicidal to the causative germ of this disease. It must be confessed that this view is attractive, and that observation has proven that there is wisdom in the thought. Experience has given proof of the value of this agent.

The *bath* is much extolled by many in this day, as it was an hundred years ago—an old method revived, but only proposing to afford one among the many appliances of comfort, not even in theory striking at the root of the disease. While Brand and others attach value to it, yet its advocates have to admit that the surroundings of *most* patients do not admit of its use. The thoughtful physician must seek further along the line for some germicidal agent to stay the ravages of this disease of germ origin. While we seek to render the surroundings as health-giving as possible to the patient; while we seek to render the hygiene as perfect as possible, in our towns and cities; while we seek to make our water-supplies as pure as practicable; yet we must remember that this disease is found in all climates and latitudes and localities, and that we cannot say the remedy has been discovered until we find an agent able to overcome the toxic effects of this poison, even as quinine and its adjuncts does that of malaria. Meantime, we may always do much to meet symptoms and ensure healthful surroundings to the sick, and seek to have the sanitation as perfect as possible.

We are often asked, Why so much typhoid fever here? The answer is, that while this disease is to be found elsewhere, mountain regions are its especial habitat. Again, we are asked, What can be done to check it here? Our city should be kept as clean and thoroughly drained as possible. Wells, which become polluted by surface drainage, and by the percolation of water through the earth from contaminating sources, as cemeteries, stagnant wells, and other foul places of deposit, should be abandoned. Privies should be discontinued, and water-closets used, for while these polluting causes may not convey the germs, or be the parent

thereof, yet they are known to be the nurses and promoters thereof. Our present water-supply has been often tested by experts, and pronounced good. Recently in Richmond, below us on the James river, it has been thoroughly tested by three highly skilled chemists, and pronounced good. The amount of lime in it readily precipitates impurities. Yet we would favor all efforts at all times to obtain the largest supply of the best water from other and all sources, so that it may be freely used. Water should be supplied at minimum cost to the consumer, for *economy* upon this line is most *unwise*, for an abundance of good water conduces to cleanliness, hygienic surroundings all tending to health; but this water should be kept uncontaminated, both by remote and local causes.

Yet there are too many facts all around us, here and elsewhere, to allow us to rest upon the conclusion that contaminated water is the only source of evil. Often the term epidemic applies with as full force as with influenza. It appeared in this city, years ago, in the whole country contiguous to Lynchburg, and elsewhere. It sprang up on isolated mountain top and mountain hollow—localities where the theory of water or milk contamination could not obtain, and nothing but an atmospheric cause could apply.

Hence we were forced to conclude that animalculæ, already in the human system, were awakened to active life and reproduction by the pabulum furnished by atmospheric causes.

Dr. Clark can tell you more of this epidemic than I. Its ravages were far-reaching; its destruction great; it passed off like a cloud-burst, which had been discharged, and health returned to the stricken country. The water-supplies were as before, but this combination of atmospheric and other causes furnishing to the cell-germs in the system the required pabulum, had ceased.

I could say much about exemption from a second attack of this disease, about recurrences and relapses, but I have trespassed too long upon your kindness.

ART. VI.—Longevity, with a List of Persons Known to Have Lived One Hundred Years or More.

By ARCHER ATKINSON, M. D., of Baltimore, Md.,

LATE PROFESSOR PRACTICE OF MEDICINE; EX-MEMBER MEDICO-CHIRURGICAL SOCIETY OF MARYLAND; EX-MEMBER OF THE MARYLAND ACADEMY OF SCIENCES, AND MEMBER BALTIMORE MICROSCOPICAL SOCIETY; LATE RESIDENT PHYSICIAN AT GREENBRIER WHITE SULPHUR SPRINGS, W. VA.

To know how to attain longevity with a full amount of mental vigor and bodily health, should form the *summum bonum* of mankind. To know how to prolong life and yet enjoy it is to reach the acme of all our diseases, and a knowledge of those measures which tend to prolong life healthfully, should constitute the desideratum of the best of men. In spite of every effort, many die early. The poet says: "The good die first;" but it is questionable whether so unpracticable a person as one who deals in rhymes and not "measures," is a fair judge for other people.

Many philosophers, or fancied such, have thought they had attained the great elixir, but their time come finally, and not later than for others, to shuffle off this mortal coil. Ponce de Leon could not live long enough to exemplify the action of the Florida waters; and it is even thought now that Florida air goes farther to prolong life than ever did its far-famed waters.

Some authorities assert that longevity may be secured by the exercise of increased human prudence; that a man who could not be expected to reach *seventy* or *eighty* years because of delicate constitution, may actually attain the age of 100. We know that prudence contributes in all to length of days, barring the accidents of life; yet, the laws of development, growth and decay are too generally recognized for thousands of years past for us to believe that we can, of our *own* volition, by *any* special system of training or of feeding, protract our ages to the full term of Methusaleh. Writers on vital statistics, like Bacon, Buffon, Flourens, Hufeland and others, have given valuable information, as far as they could, on this subject; yet, their writings are more like fairy

tales than statistics really. Lord Bacon thought the ancients possessed some secret (art) of prolonging life, and that this secret had been lost, but that diligent research might restore it; but in this search he failed hugely. In the *Encyclopædia Britannica*, some one suggested that the people, before the deluge, regained their vital powers by now and then partaking again of the "Tree of Life," just as the gods fed on ambrosia and slaked their thirst on nectar.

Buffon, the naturalist, thought that in early days the earth was less solid and compact than now, and that the laws of gravitation operated more feebly. When we hear of men in the olden days living to be of such fabulous ages, we do not exactly know how long was the year in those days.

There is all the difference in men. Some are born lazy, and, like reptiles, continue so all their lives. Others are ever on the move or on the watch, either to do good to themselves or to humanity. Some do not know when they get old or feel the encroachments of age and decay. Delfrench, at 120 years of age, wanted to re-enlist as a soldier; while an old soldier in the district of Polosk, in Russia, was 160 years old, and had seen seven successive sovereigns.

Man grows about the slowest of all animals. Many cold-blooded animals have an almost indefinite period of life. They go slowly, and they live long as the tortoise; and yet the eagle is a long-lived and active bird. The carp fishes in the lake at Fontainebleau, in France, many of them still show on rising to the surface the rings which Diana, of Poitiers, in the days of Francis the First, had caused to be placed in their noses. Some of these fishes are blind and almost blacked, yet they still live on, as large as sturgeons, some of them. Haller says there are individuals who have lived to 120, 140, and 160 years, to say nothing of Thomas Parr, of England.

Man is like a forced plant in these modern days—like a sprout in the hot-house. Precocious education ends in early death or in worse things. The temperature of the

biceps muscle at rest is two degrees less than after sawing wood for a few moments, and yet the arm is the better for the exercise. Without exercise, the appetite fails and growth becomes retarded, where we fail to eat and to assimilate the proper amount and kinds of food.

Attempts have been made to build up theories for the prolongation of life. Some have thought that a diet suitable to each period of growth would accomplish the end, and prolong life to the full one hundred years. Flourens stated the length of life to be a multiple (*five*) of the period of growth, which usually ends when the bones become united to their epiphyses. Then, judging twenty years for that growth and union, he argued that one hundred years should be the normal period of life. Experience has shown that neither labor nor rest will do much more towards prolonging life than if no special care is taken. Yet, it has been observed that an active, indeed, a fatiguing life, during the first half of a man's existence, conduces to old age, but that the latter half of his life should be uniform and peaceful.

Cornoro, an Italian nobleman and a centenarian himself, declared that a man at fifty years of age had attained but half his life. Even Japanese girls attain their majority at fifty years.

Good living is considered in England so conducive to longevity that even the "Roast Beef of Old England" has become one of her naval airs. It is the "merry heart that makes glad" that promotes long life, and which keeps its owner "with loins ever girded, alert for an expected call," and, not like the cynic referred to by Beecher as the "Human owl, vigilant in darkness and blind to the light." How grand if we could all live, like Mrs. Dalton, to the age of 102 years, and who smoked until she was one hundred years old and then stopped it for fear the habit might shorten her life; better far than being like the Laplanders, who all look alike and appear like Minerva in being all of the same age, or like Cartaphilus, who never gets beyond one hundred years, always returning to the original thirty years.

The physician should know as well how to let live as to live himself—"to let life in as well as to keep death out;" and to know how to live and to apply that knowledge, has been man's aim since creation's dawn.

Seth lived 912 years.

Enos lived 905 years.

Cainan lived 910 years.

Judith lived 105 years.

For some years I have been compiling from reliable sources the following list of persons who are known to have lived a hundred years or more:

Monsieur Chevreau, France, aged 103 years, living 1888.

Mrs. Stillwaggon, Long Island, aged 103 years, living 1888.

Miss Rebecca Russell, Brighton, Md., aged 100 years, living 1888.

Zephoniah Bunce, Port Huron, Mich., aged 100 years, living, 1888.

James Cameron, Albany, N. Y., aged 105, died 1883.

Sloan, Catharine, Roanoke, Va., aged 100 years, living 1888.

Perkins, Geo. S., Norwich, Conn., aged 100 years, died 1888.

Ryder, Jane, Orrington, Me., aged 103 years, living 1887.

Muckleweid, Mrs., Page county, Va., aged 110 years, died 1884.

Fielder, John, Laurens county, S. C., aged 107 years, living 1888.

Wheeler, Agnes, Carthage, Tenn., aged 106 years, died 1888.

Heal, Chesley, Learmount, Me., aged 109 years, died 1888.

Gordon, Jettory, San Diego, Cal., aged 107 years, living 1888.

Muncey, Jacob, Elkton, Va., aged 116 years, died 1888.

Hickey, Ann, Great Barrington, Mass., aged 105 years, died 1893.

Hadden, Mrs., Dinwiddie county, Va., aged 102 years, died 1874.

Stravarides, Geo., Smyrna, Asia, aged 132 years, died 1876.

Casterwelder, Mrs., Frederick county, Md., aged 114 years, died 1877.

Smith, Osterdock, Mrs., Frederick county, Md., aged 103 years, living 1875.

McKay, Margaret, Ft. Royal, Va., aged 102 years, died 1888.

Steele, Alletus, Passaic, N. J., aged 105 years, living 1875.

Valentine, Nancy, Cumberland, Md., aged 100 years, living 1875.

Chapin, E. B., Dr., Charlotte, Mich., aged 105 years, living 1875.

Authors, Hester, —, aged 115 years, died 1875.

Najoleki, Mrs., Kamoinken, aged 103 years, died 1575.

Cornoro, an Italian, Italy, aged 100 years, died 1866.

Cugna de Numas, Bengal, aged 370 years, died 1556.

Mann, —, Haritz, Bavaria, aged 105 years, died 1875.

Bœhm, Father, New Jersey, aged 101 years, living 1875.

Locke, Nelly, Millwood, Md., aged 111 years, died 1875.

Bowie, John, — —, aged 102 years, died —.

Johnson, Nath., Frederick, Md., aged 104, years, died 1875.

Wilson, Sol., Jackson Co., Ind., aged 104 years, living 1875.

Carter, Elijah, Balt., aged 100 years, died 1875.

Long, Moses, Kentucky, aged 111 years, died 1875.

Allen, grandson of Ethan Allen, aged 101 years, died 1875.

Landsperger, Catharine, Balt., aged 106 years, died 1875.

Duvall, Alice, Mrs., Pr. Geo. Co., Md., aged 100 years, died 1876.

Bogart, Albert, Patterson, N. J., aged 103 years, died 1882.

Hansborough, Mrs., Culpeper, Va., aged 107, died 1859.

Jones, Henry, Balt., aged 112, living 1882.

Files, Sarah, Clifton, Ohio, aged 100 years, died 1875.

Royal, Peter, Lee Co., Va., aged 105 years, living 1875.

Lether, —, Balt., aged 105 years, living 1875.

Baynor, Sally, Balt., aged 101 years, living 1875.

Potter, Mrs., Balt. Co., Md., aged 101 years, died 1875.

Falkner, Ro., Warrenton, N. C., aged 105 years, living 1879.

Williams, Jennie, York, Pa., aged 105 years, died 1875.

Ann of Earls, Barton, Eng., aged 100 years, living 1876.

McIlcor, Griffintown, aged 105 years, living 1879.

Holgate, Dr., Salem, Mass., aged 100 years, died 1829.

Mafelsky, Kammonken, Prussia, aged 103, died 1877.

Laherbush, Capt., London, aged 100 years, living 1874.

McKim, Wm., Rich'd, Va., aged 130 years, died 1818.

Kentz, Elizabeth, York, Pa., aged 103 years, died 1766.

Somet de la John, York, Pa., aged 130 years, died 1766.

Tarrance, Dick, Clinton, N. C., aged 100 years, living 1877.

Smith, Jas., Princess Anne, Md., aged 109 years, died 1880.

Brooke, Wonder, Pr. Ed. Co., Va., aged 126 years, died 1819.

Johnson, Isabel, Toronto, Can., aged 110 years, died 1880.

Spencer, Eleanor, Accomac Co., Va., aged 121 yrs., died 1771.

Adams, Frances, Balt., aged 104 years, died 1877.

Lange, Chas., Campbell Co., Va., aged 121 years, died 1821.

Dougherty, Mary, Phoenixville, Pa., aged — yrs., living 1880.

Roberts, Charles, Bullspen, aged 116 years, died 1779.

- Welsh, Benj., Balt., aged 108 years, living 1877.
Crull, Phil., Fairfax Co., Va., aged — — —, died 1813.
Holloway, Bonnie, Fauquier Co., Va., aged 115 years, died 1882.
Skelton, Mrs. Emma W., Ashburton, Mass., aged 103 years, died 1881.
Rudisell, Polly, Miss, York, Pa., aged 99 years, died 1882.
Rudisell, Mrs., York, Pa., aged 111 years, — — —.
Webster, Dora, col'd, Phila., aged 105 years, died 1881.
Gassoway, Margt., Phila., aged 106 years, died 1881.
Brouch, Cath., Mrs., Boston, aged 111 years, died 1882.
Wingfield, H. Sally, Mrs., Chicago, aged 111 yrs., died 1182.
Speade, Ann, New York, aged 105 years, died 1882.
Frazier, Sallie, col'd, Harrisburg, Pa., aged 102 years, died 1882.
McElroy, Mary, Greensburgh, Ind., aged 106 yrs., died 1882.
Dempsey, Margt., Ellenville, N. Y., aged 111 yrs., died 1880.
Thomas, Charlotte, col'd, Carroll Co., Md., aged 100 years, died 1882.
Cusarp, Thos., Iowa, aged 106 years, died 1882.
Duvall, Sarah, Iowa, aged 101 years, died 1882.
Weston, E. T., Mrs., New Hampshire, aged 104 years, died 1882.
Brown, Jennie, Washington, aged 110 years, died 1880.
Thompson, Sarah, Mrs., New York, aged 101 yrs., died 1879.
Bogart, Alb. C., Patterson, N. J., aged 100 years, living 1881.
Brownfield, Benj., Monroe, Pa., aged 101 years, living 1880.
Graham, Lydia, Mrs., Pt. Lyon, N. Y., aged 104 years, died 1880.
Payne, Luray G., Stafford Co., Va., aged 101 yrs., died 1881.
Hamilton, Mary, Harford Co., Md., aged 102 yrs., died 1879.
Glover, Prudence, Cincinnati, O., aged 100 yrs., living 1880.
Koehler, Mary, Balt., aged 110 years, died 1878.
Jackson, John, Vienna, N. Y., aged —, died 1878.
German, Edith, Phila., aged 115 years, died 1880.
Frank, negro man, Woodstock, Va., aged 114 yrs., died 1820.
Taylor Wm., Pittsylvania Co., Va., aged 114 yrs., died 1794.
Ingraham, Rev. Dr., Scotland, aged 103 years, died 1879.
Rice, Maria, Mrs., Lehigh Co., Pa., aged 107 yrs., died 1819.
Berkely, Alex., Charlotte Co., Va., aged 114 yrs., died 1825.
Neanœne, Mary Mrs., N. Y. city, aged 106 yrs., died 1879.
Walker, Quag, Jefferson, Texas, aged 103 yrs., died 1875.
Valentine, Nancy, Alleghany Co., Md., aged 114 years, died 1878.
Manning, Catharine, Balt., Mich., aged 106 yrs., died 1882.

Carmichael, Priscilla, Surry Co., Va., aged 103 years, died 1818.

Berkeley, Mrs. A., Charlotte C. H., Va., aged 111 years, died 1826.

Delpench, ———, 120 years; ———.

Carter, Sarah, Petersburg, Va., aged 112 years, died 1825.

Farrin, Fanny, Kenonsville, N. C., aged 110 yrs., died 1877.

Worton, Mrs. Charlotte, Va., aged 111 years, died 1773.

Negro, Richmond, Va., aged 130 years, died 1818.

Harrison, Mrs., Brunswick, Va., aged 110 years, died 1885.

Holyoke, E. Aug., Dr., Salem, Mass., aged 101 years, living 1881.

Johnson, Washington, D. C., aged 115 years, died 1823.

Gelbert, Augusta Co., Va., aged 112 years, died 1844.

Coffer, John, Norfolk, Va., aged 120 years, died 1836.

A man in Haretz, Bohemia, aged 105 years, died 1675.

Brooks, Utica, N. Y., aged 102 years, died 1876.

Massey, Cath., Phila., aged 100 years, died 1879.

Johnson, Silby, Balt., aged 102 years, died 1881.

Rontte, Joseph, Oxford, Eng., aged 100 years, ———.

Atkins, Sylvanus, Volatia, N. Y., aged 104 yrs., living 1877.

Negro woman, Long Island, aged 115 years, died 1875.

Graves, Jemima, Springfield, Mass., aged 100 years, living 1875.

Smith, Lady, London, aged 104 years, living 1876.

Johnson, Maria S., Balt., aged 100 years, died 1875.

Woman, East Balt., Md., aged 102 years, died 1877.

Gittings, Mrs., Rockville, Md., aged 102 years, died 1873.

Mead, Ira, Mrs., Greenwich, Ct., aged 106 years, living 1876.

de Pouson, d'Allegre, Marquis, Paris, aged 102 years, living 1875.

Fowler, Mrs., Balt. Co., Md., aged 112 years, died 1876.

Van Ranselear, Mrs., Fairpoint, N. Y., aged 100 years, died 1875.

Blackwell, John H., Troy, N. Y., aged 108 yrs., died 1875.

Young, Charles, Scott Guards, aged 108 years, died 1875.

Boddy, Charles, Wrightsville, Pa., aged 115 yrs., died 1876.

Shaw, Betsy, Warren, N. H., aged 101 years, died 1875.

Levering, Abigail, Oxford, N. C., aged 100 yrs., living 1875.

Kellerhouse, Ann, Kinderhook, N. Y., aged 106 years, died 1875.

Hughes, Mary Ann, Dorchester Co., Md., aged 107 yrs, died 1876.

Labor, Monroe, Penn., aged 112 years, died 1875.

Marchand, Adela, Paris, France, aged 108 years, died 1876.

Darke Horner, Washington, D. C., aged 112 yrs., died 1879.
Leopold, Elizabeth, Mrs., Graniteville, S. C., aged 107 years,
died 1878.

Hinmond, North Barry, Ct., aged 100 years, died 1875.

Lansperger, Catherine, Balt., aged 106 years, died 1878.

Jenkins, Harry, London, aged 170 years, died —.

Evans, Mrs., Augusta Co., Va., aged 102 years, died 1875.

Goodall, Mary, Mrs., Pequonan Bridge, Ct., aged 103 years,
died 1880.

Patrick, Lucy, London, Canada, aged 100 years, died 1878.

Dempsey, Ann, Smyrna, Del., aged 100 years, died 1867.

Woman, London, aged 120 years, died 1875.

Aicha Ben Saheras, Algeria, Africa, aged 112 yrs, died 1879.

McClellency, Portsmouth, Va., aged 115 years, died 1876.

Woman, Hungary, aged 117 years, died 1855.

McLaughlin, James, Harford Co., Md., aged 100 years, died
1875.

Wright, Betty, Lynchburg, Va., aged 105 years, died 1879.

Wilkerson, Wm., Balt., aged 102 years, died 1875.

Jerome, Polly, New London, Ct., aged 102 years, — 1880.

Denney, Ann, Mrs., Smyrna, Del., aged 103 yrs., died 1877.

Bullock, John, Bristol, R. I., aged 105 years, died 1876.

Foyenbacker, Betty, Barton, Md., aged 104 yrs., died 1880.

McDewett, Margaret, New York, aged 105 years, died 1875.

Coffee, Mary, New York, aged 105 years, died 1875.

Man, Horitz, Bohemia, aged 105 years, — 1875.

Bandeau, Michel, St. Louis, aged 106 years, died 1876.

Rutter, Elizabeth, Balt., aged 100 years, — 1875.

Morris, Susan, Phila., aged 118 years, died 1880.

Armstrong, Mechanicsburg, Pa., aged 101 years, died 1879.

Woman, Hungary, aged 112 years, died 1872.

Woman, London, aged 102 years, died 1875.

Kennon, Lucy, Kentucky, aged 123 years, living 1876.

Michael, Edward, York, Pa., aged 108 years, died 1876.

Haling, Phoebe, Point Pawnee, Vt., aged 105 yrs., died 1878.

Woman, Omaha, aged 100 years, living 1877.

Wallback, Mrs., New York, aged 100 years, died 1878.

Bratt, Nicholas, Hart's Falls, Mass., aged 100 yrs., — 1879.

Woman, Almshouse, N. Y., aged 103 years, died 1876.

Ingram, Dr., Wrist, Scotland, aged 100 years, died 1876.

McGavey, Bayou, Louisville, Ky., aged 105, — 1879.

Wood, Mrs., Pr. Geo. Co., Md., aged 105 years, died 1850.

McGarity, Kate, Mrs., Balt., aged 100 years, died 1878.

Wood, Mrs., Pr. Geo. Co., Md., aged 100 years, died 1846.

- Cornise, Henry, Dorchester Co., Md., aged 107 years, living 1879.
- Schneibly, Mary W., Mrs., Hagerstown, aged 103 years, died 1876.
- Woodruff, Roxana, Vineland, N. J., aged 100 yrs., died 1876.
- Gorman, Patrick, Ottawa Co., Mich., aged 110 yrs., died 1879.
- Bardsley, Simon, Balt., aged 110 years, died 1876.
- Darr, Phillip, Warren Co., Va., aged 105 years, died 1876.
- Hawley, Hamit, Boston, aged 103 years, living 1875.
- West, Benj., Balt., aged 109 years, died 1879.
- Labor, Monroe Co., Pa., aged 112 years, died 1872.
- Bass, Thomas, Phila., aged 107 years, died —.
- Mahoney, Margaret, Boston, aged 109 years, died 1879.
- Maiden, Ladya, Stonaway, aged 115 years, living 1880.
- Truly, Dolly, Balt., aged 105 years, living 1880.
- Hall, Margaret, Mrs., Baptist Home, Phila., aged 104 years, living.
- Brink, Maria, Mrs., Highwood, N. Y., aged 100 years, living 1876.
- Jones, Alice, Miss, Talbot Co., Md., aged 100 years, died 1876.
- Gilbert, Jane, Mrs., Balt., aged 102 years, living 1879.
- Patsy, Aunt, Washington, D. C., aged 115 years, died 1876.
- Crier, Lilly, Balt., aged 108 years, died 1879.
- Smith, Jno., Phila., aged 104 years, died 1876.
- Armstrong, Robt., Newburg, Ont., aged 100 yrs., died 1879.
- Groom, Esther, Princeton, Ky., aged 120 years, living 1876.
- McGregor, Milby, Berlin, Md., aged 108 years, died 1877.
- Carter, Esther, Fauquier Co., Va., aged 140 years, died 1858.
- Conrad, Rich'd., Montgomery Co., Pa., aged 109 years, died 1877.
- Whalley, Edwin, Eastern Shore of Md., aged 103 years, died 1718.
- Montpeusier, Jude, Balt., aged 100 years, living 1879.
- Sprinklar, Sarah, Balt., aged 103 years, died 1880.
- Harry, colored, Balt. Co., 11th District, aged 110 years, died 1877.
- Farny, Fanny, Mrs., North Hampstead, Pa., aged 103 years, living 1877.
- Gary, Margaret, Mrs., Coborrus Co., N. C., aged 116 years, died 1877.
- Pratt, Trueman, col'd, Balt., aged 102 years, died 1877.
- Carrigan, Patrick, New York, aged 104 years, died 1878.
- Padestaoneta, Augla, Mrs. Cin., O., aged 109 yrs., died 1878.
- Turner, Larkin, Georgia, aged 110 years, died 1878.
- Halligan, Patrick, Balt., aged 101 years, died 1878.

Joynes, Amy, col'd, Accomac Co., Va., aged 105 years, living 1878.

Kretzen, Eliz., Mrs., Balt., aged 108 years, died 1882.

Doran, Barney, New York, aged 106 years, living 1879.

Olixir, Lydia, Balt., aged 109 years, died 1879.

Edison's grandfather lived 103 years.

Edison's grandmother lived 107 years.

Shelton, Patsy, Christiansburg, Va., aged 115 yrs., died 1880.

Steadwell, Ellen, col'd, New York, aged 104 years, died 1880.

Hamilton, Ed., Horford Co., Md., aged 104 years, died 1880.

Hamilton, Jane, Horford Co., Md., aged 103 years, died 1879.

Stevenson, Cath. K. M., N. Y., aged 101 years, died 1882.

Newton, Eliza, col'd, Balt., aged 100 years, died 1880.

Brady, Lew, col'd, Westchester, N. Y., aged 107 yrs., living 1880.

Cunningham, Miss, Glasgow, aged 102 years, living 1880.

Dorsett, Dan, N., Rev., Elgin, Ill., aged 100 years, died 1879.

Kelly, Mary, Mrs., Richmond Co., O., aged 100 yrs., died 1881.

Thompson, Sarah, Washington, aged 102 years, died 1881.

Brady, Lewis, New York, aged 108 years, died 1881.

Mahone, Rachel, Phila., aged 100 years, died 1881.

Cornaro, Italy, aged 100 years, died 1893.

Campas, Marcellina, Havana, aged 114 years, died 1888.

Hinton, Henrietta, Balt., aged 100 years, living 1888.

Reiley, John, Frederick Co., Va., aged 107 years, died 1884.

Eggleston, Thos., Lincoln Co., W. Va., aged 112 yrs., died 1888.

Washington, Maria Catharina, Carlisle, Pa., aged 100 years, died 1888.

Marshall, Margaret, Alleghany Co., Pa., aged 101 yrs., died 1888.

Dr. Jackemoviez, Russia, aged 106 years, died 1883.

Washington, Rosetta, Louisville, Ky., aged 121 yrs., living 1888.

Clendennin, Chas., Alleghany Co., Pa., aged 100 yrs., living 1888.

Mahala, Thos., Sharpsburg, Md., aged 100 years, died 1888.

Besser, Sarah W., Balt., Md., aged 100 years, died 1888.

Reily, Mrs., Balt., Md., aged 104 years, died 1889.

Reily, Bernard, Balt., Md., aged 109 years, died 1888.

Dutton, Margaret, Mrs., Shelbyville, Ind., aged 102 years —.

*Clinical Reports.***Cirrhosis of the Liver Complicated with Delirium Tremens and Hæmorrhage.*****By THOMAS NORRIS VINCENT, M. A., M. D., of Washington, D. C.,****VISITING PHYSICIAN PROVIDENCE HOSPITAL, ETC.**

A. B., aged 35, was admitted to Providence Hospital April 20th, 1893. At the time of entrance he was said to have been sick for two days only. He was tall, thin, of bilious diathesis, and gave no evidence, upon inspection of his body, of any constitutional ailment of long standing. There were no signs of syphilis or tuberculosis. He gave as his occupation that of bar-tender since seventeen years of age. He denied that he had ever been addicted to the excessive use of stimulants, but said that he had usually taken a drink of whiskey three or four times a day for some years past, and also a moderate amount of beer. He complained of headache, and at times vertigo. The tongue was thickly coated, dry; was troubled at times before entrance with nausea and vomiting. The vomited matter was watery, offensive, and tinged with bile.

There was marked constipation. The abdomen was swollen and tympanitic, and he was much disturbed by the escape of gas by the mouth and at times by the rectum. The body was distinctly jaundiced. He had a temperature of 100° and a pulse of 90.

On physical examination, the chest was negative, save that the heart was rapid in its action. On percussion, the abdomen was tympanitic to such an extent that nothing could be outlined with certainty. There was pain, on pressure, throughout its whole extent, but particularly in the region of the liver. The superficial veins on the right side were enlarged slightly. The urine was scanty, thick, and upon testing gave evidence of the presence of bile and albumen.

April 21st, the day after his admission, the tympany being much reduced, an examination was made of the abdomen. The liver dullness was vertically diminished, and upon passing the hand under the ribs the lower border could be felt, being farther back than normal. The spleen

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, November 13th, 1893.

was slightly enlarged and tender. Some tenderness was found over the stomach. During the night just passed he vomited at frequent intervals, and practically retained no food. He had two small watery evacuations from the bowel. Very offensive and tinged with bile. The jaundice was noticed to be much deeper than on the previous day.

April 22.—The man yesterday afternoon gave evidence of delirium tremens; had complete loss of appetite and frequent attacks of vomiting. In time the delirium became so severe that he had to be strapped in bed.

He had had three watery passages attended with much pain and tenesmus, entirely free from fecal matter, but no blood. The jaundice had increased to such an extent that the body was the color of light mahogany. The man had frequent attacks of hiccough.

April 23.—The delirium still continued and necessitated the withdrawal of food from him for a time—especially since any attempts to feed him caused him to resist and thus waste his strength.

April 24.—After three days of delirium he fell into a deep sleep, lasting some ten hours, and upon awaking took a fair quantity of milk, which he retained. The gastric symptoms up to this time so prominent in the case gave him no trouble.

April 25.—Five days after admission, at an early hour in the morning, he had a profuse passage from the bowel, loosing about a pint of blood. This was soon followed by another passage of the same character. The shock was such that he was with difficulty caused to react, but with reaction there was a return in part of the hæmorrhage. The vomiting, which had not been severe for some time, now returned, and clotted blood was noted in the vomited matter. During the afternoon he had several movements from the bowel, more or less tinged with blood. He was troubled at times with coughing spells, the expectorations being tinged with blood. He had also one or two slight hæmorrhages from the nose, and at night it was noted that there were quite a number of hæmorrhagic extravasations on the trunk and limbs. The man passed into a comatose condition, and died the following morning, six days after admission.

Autopsy.—Heart, lungs and pleura, negative.

Peritoneum free from ascites, but bound down by adhesions in the region of the liver. The liver was smaller than normal, hard on section, and in passing the hand over the outer surface, hard nodules could be noted. The gall-blad-

der was free from bile, but a large quantity of inspissated mucose was present. Kidneys were smaller than normal, capsules adherent, and a few cysts noted. Spleen was enlarged.

Treatment.—As the case, to all purposes, was acute in character, no history of previous kindred attacks, and jaundice being the marked symptom, mild chloride of mercury, gr. $\frac{1}{2}$ th every hour was given, until one grain had been taken. Phosphate of sodium, 5j, was ordered every six hours. Enemata of soapsuds and oil of turpentine for the tympany.

The following day the same treatment was employed, minus the mild chloride.

The third day strong nitric acid, gtt. iv, well diluted, every six hours. Upon the appearance of delirium tremens, strychnia sulphate gr. $\frac{1}{30}$, and if necessary, to be given by hypodermic injection.

For hæmorrhages I directed heat to the extremities and ice bag to the abdomen. Aromatic sulphuric acid, two drops every four hours, and fluid extract of ergot 5j, every four hours, and if required, the ergot was to be given by hypodermic injection.

The milk ordered as diet was diluted with lime water, then with bicarbonate of sodium, then peptonized.

Beef tea was tried in small quantities, but from the time of entrance into hospital until he died very little would remain upon his stomach. Very little, if any, of the medicine administered remained on the stomach long enough to be absorbed, and by reason of the diarrhœa and rectal tenesmus, the administration of food by the rectum was out of the question. Whiskey was finally resorted to by hypodermic injection up to the time of the appearance of hæmorrhages.

A case somewhat like this is reported from one of the French hospitals in 1882, the patient being a woman twenty-nine years of age. She had suffered from syphilis, and was a chronic alcoholic; had had several attacks of delirium tremens; was a sufferer from chronic gastritis, but had never had any symptoms of any kind leading to suspicion of cirrhosis of the liver. But after a very severe debauch, she was suddenly jaundiced, had œdema of the feet, swollen abdomen, dyspnœa, and was sent to the hospital. She had been there but a short time when she had frequent attacks of hæmatemesis, hæmoptysis, melæna, and epistaxis. After death she was found to have had cirrhosis of the liver, contracted kidney and hypertrophy of the heart.

But from the appearance of marked symptoms until death, two months elapsed.

Many other cases kindred to the above are at hand, but in most of them, although the bleeding was severe, it was from one or two divisions of the gastro-intestinal tract, and extended over a period of time much longer than the first case noted.

Thinking that the man might have made statements of a misleading nature as to his illness before entrance into the hospital, I questioned his relatives and employer as to his previous history, and in particular as to a possible history of alcoholism. His father I found to be a chronic alcoholic, and in a condition bordering upon alcoholic dementia. His mother, up to the time of her death, was in good health. She died of an acute disease. The man's employer stated that he had never known him to be even slightly under the influence of alcohol, though he was accustomed to take a moderate quantity of it; but that for some reason unknown to him, the man, previous to his being admitted to the hospital, had gone away from the city, and had been upon a very heavy spree for eight days, and it was only at the end of that time that he took to his bed, and two days later entered the hospital.

The case seems to be of interest in the lack of the usual symptoms of cirrhosis of the liver; in the lack of any constitutional trouble that might throw light upon the severity of the hæmorrhage, and in the rapidity and severity of the symptoms.

1221 *N Street, N. W.*

Case of Injury to Brain Substance by an Axe—Recovery.

By M. J. PAYNE, M. D., of Locust Grove, Va.

Freddie Knighton, white, male; age, eight years. I was asked to see a boy that had been struck by an axe which had been used in driving a stake into the ground. About one hour had elapsed before the patient was reached. He was found couched upon the floor, covered by a blanket, and in a state of shock. The injury occurred about 7 P. M., June 24, 1893. The axe came off the handle and struck the head of the patient standing directly in front. He had lost right much blood. An attempt was made by the by-

standers to check the hæmorrhage by using cob-web from the wall, etc.

¶ An examination revealed a scalp wound on the right side of the head (fronto-parietal region), also the skull bone, dura mater, pia and arachnoid membrane had been cut and the brain substance injured for a depth of probably three-eighths of an inch. The location and extent of the wound may be judged by the following actual measurement: Circumference of head, 22 inches; length of scalp wound, 3 inches; distance (in a straight line) from supra orbital ridge to anterior end of wound, $1\frac{1}{2}$ inches; from anterior end of wound to median line of head, 3 inches, and from posterior end of wound to median line, $2\frac{1}{2}$ inches; from tubercle of zygoma to anterior end of wound, 3 inches; to the posterior end of wound, $4\frac{1}{2}$ inches. The skull bone was cut through for $1\frac{1}{4}$ inches, extending from the posterior end of the wound forward for $1\frac{1}{4}$ inches; the dura, pia and arachnoid and brain substance were cut through a length of about three-quarters of an inch, and for a depth (as previously stated) of three-eighths of an inch.

Hence, the deepest portion of the wound was posteriorly. The direction of the wound was backward and inward.

After examination was made and the extent of the wound learned, the area was thoroughly cleaned, surgically, hæmorrhage controlled by compresses, assistance summoned and consultation had; consequently, Dr. James M. Scott was asked in consultation and arrived the next morning about 10 o'clock, June 25th.

After consultation preparations were made to operate. Chloroform being given, the dressing removed, the wound was cleansed. It was found necessary to cut away, by bone nippers, a portion of the sharp, projecting bone to secure more ready coaptation. The dura mater was not stitched, but left to itself, in order that drainage should be better. Horse-hair (sterilized) was used as a drainage. The scalp wound was now closed by the interrupted silk suture; iodoform used quite freely and an antiseptic dressing put on; a retaining bandage and cap constituted the dressing. The operation being slow took some time. Only twelve drachms of chloroform were used. The patient rallied nicely from the operation and suffered scarcely any shock.

It was now ordered that he be kept rigidly quiet in a dark room. Diet of *milk*. Hydrargyri chl. mit. gr. iij., with sacchari albi, were given; also potassii bromid. gr. x and ext. ergot. fld. min. x three times a day; antikamnia

and salol, of each gr. iij in powders for neuralgic pain of right eye.

On evening of June 26th the temperature was 100° F., pulse somewhat quickened; wound dressed. June 27th, temperature $100\frac{1}{5}^{\circ}$ F., some headache and bowels constipated; wound redressed; gr. iij of hydrarg chl. mit. given. June 28, temperature $100\frac{1}{5}^{\circ}$ F.; wound re-dressed.

June 29, temperature $101\frac{1}{5}^{\circ}$. Dr. Scott being present the dressings were removed. Patient having been restless and fretful, with some headache, it was decided to clip one or two stitches so as to allow easier drainage. There was no pus, but the discharge of the wound fluid was more profuse than expected; hence the reason for removing dressings every day.

June 30, temperature 100° F.; patient quiet and resting well; dressings removed because of free discharge. After this the temperature continued below 100° F. until July 2, and slowly reached normal on July 4.

On the 15th of July the wound was about healed; drainage had been removed. He was still kept in bed. A new dressing was put on, and on July 22, when the writer called, he was up and walking around in his room. He was then cautioned as to fatigue, exposure to heat, etc.

The case, from first to last, never presented any symptoms of severe brain trouble. Had the bone been pushed back in place, compression of brain would have followed with probable loss of life. Some slight symptoms of brain irritation were present at first, due, probably, to localized meningitis, but passed away. There was, absolutely, never any pus at any period of the case.

The only thing of especial interest in the after condition was a very slight dullness of pressure—sense and somewhat of sensation on the left side. This was very slight, and passed away (due, probably, to some molecular change). The reflexes on left side also somewhat less than on right side. Pupillary reflexes both as to light and accommodation normal. All of the special senses, so far, are normal—speech, hearing, smelling. There can be no opinion as to the intellect, as he is not well schooled for age—neither reads nor writes—but is considered bright as to memory, which is still good. Up to the time of writing, the patient has never presented any ill-effects from the accident.

Case of Penetrating Knife Wound of Abdomen—Descending Colon Wounded, Protruded and Strangulated — Recovery.

By R. K. SMITH, M. D., Pratt City, Ala.

Louis K., negro, male, age 25; admitted October 29, 1893. Received, during a fight, a stab in left side below ribs. I found him suffering from severe shock, as indicated by his pulse, respiration and general appearance.

On examination of the wound it was found to extend from a point about midway between the crest of ilium and lower rib, beginning at the anterior border of quadratus lumborum muscle, upward and inwards to a little below the cartilages of eighth and ninth ribs, a distance of about four inches. Through this wound a knuckle of the descending colon was protruding, about four or five inches in length. The wound, colon and integument was covered with clotted blood and feces, the hæmorrhage coming from muscular arteries, the feces through an opening in the colon, which run transversely to its long axis and was about one inch long, and directly into one of the natural sacculations of the colon, slightly posterior or external to anterior layer of longitudinal muscular fibres. Hypodermic injection of morphine and atrophine while preparations for operation were being made.

Patient placed on table and wound washed off with sterilized water and tr. sapo. vir., the inside of colon cleaned out and washed. The opening in colon was closed with interrupted "Lembert sutures." A double row, the first one extending slightly beyond the ends of wound and the second some little distance further. The bowel was noticed to begin to become congested, and on attempting to replace it it was found to be so tightly constricted, where it passed through the peritoneum, as to render it impossible to return it without violence.

He was now given chloroform (he would not take it sooner) and the opening enlarged at the bottom, the colon returned to peritoneal cavity, which was then flushed out with distilled water at a temperature of about 105° F.

The peritoneum was closed by a continuous suture of cat-gut, then fascia and muscle were brought together by three or four rows of buried cat-gut sutures, and the skin united by silk sutures passed deep into muscular substance to reinforce cat-gut sutures. The wound was opened with iodo-

form and bichloride gauzes and patient put to bed. Morphine and atropine were ordered to allay restlessness if necessary. Sweet milk diet was to begin in twenty-four hours; no solid food allowed.

On admission his pulse was 104, temperature $98\frac{2}{3}^{\circ}$; at 6 P. M. pulse 80, temperature $100\frac{2}{3}^{\circ}$. Second day, 6 A. M., pulse 78, temperature $98\frac{2}{3}^{\circ}$; 6 P. M., pulse 100, temperature $100\frac{4}{5}^{\circ}$. Temperature fell to normal on third day and remained so.

Urine normal; bowels did not act till seventh day, when a small enema of hot water was given, which was followed by a very large action.

Sutures removed on eighth day and wound found to have united by first intention.

Dressing removed permanently on twelfth day; solid food allowed on fourteenth day; went to work at his usual avocation one month from time of the receipt of injury.

The circumstances attending this case were of such a nature as to render it a favorable case for operation—the funnel shaped wound, narrow at peritoneum and wide at external opening; the immediate protrusion of the colon before any feces or intestinal gases could enter the peritoneal cavity, and the constriction of the bowel by the peritoneal portion of the wound, so as not to allow any foreign material to enter from the outside; in other words, the colon acted as a stopper. The colon being full of feces was probably conducive to the rapid protrusion, also the fact that the wound was in a sacculated portion of the bowel, and formed no greater constriction after it was united than is normally found in the colon.

The Uninterrupted and Complete Recovery.—There being no tendency to ventral hernia at this time, this is therefore called a complete recovery. The fact that the operation was done at once, and part of it without an anæsthetic of any kind whatever, make it worthy of this record.

This adds one more case to the list of successful operations for penetrating wounds of the abdomen complicated by visceral injury.

Paralysis of Arm and Convulsions in a New-Born Infant—Remarks.

By ISAIAH H. WHITE, M. D., of Richmond, Va.

After a protracted labor, the child, born asphyxiated, was resuscitated by artificial respiration.

On the following day the right arm was observed to be paralyzed, hanging powerless at the side, movements of the fingers only being possible. Slight convulsions supervened, which recurred several times daily for three days. There was gradual improvement of the paralysis, and at the end of a month the hand could be carried to the head.

Intra-cranial hæmorrhage in the neighborhood of the anterior central convolution would cause the convulsion and paralysis of the arm, which disappeared with the absorption of the clot.

Gowers has described a form of paralysis of the arm due to violence at the time of birth, which he thinks due to injury of the branch from the sixth cervical nerve to the tracheal plexus. The paralysis in these cases is usually permanent, and subsequent development of the limb is imperfect.

The pseudo-paralyses of the new-born due to syphilis are not accompanied by convulsions or trophic disturbances, and usually disappear in a few days.

Correspondence.

A Review of "A Contribution to the History of the Discovery of Modern Surgical Anæsthesia, by Luther B. Grandy, M. D., of Atlanta, Ga."

My Dear Dr. Edwards,—While absent from home for several months in the Southwest, a leading article appeared in the *Virginia Medical Monthly* for October, 1893, under the title quoted at the head of this paper. With your permission, and that of the gentleman from Georgia, I would like to review his paper in a friendly way and offer some objections to its assumptions.

Dr. Grandy begins his paper by saying: "The true story of the first discovery of anæsthesia, and of the circumstances connected therewith, has not yet been told in print. Reliable history is never written by the generation which makes it. The generation which inaugurated the era of painless surgery has passed away; the participants in the long and bitter controversy over the question of priority have disappeared; and those of us who have come upon the scene may now undertake to gather up the data relating to that great discovery unaffected by favor and unbiased by prejudice."

Indeed, if the true story of anæsthesia has not been told in print, then it never will be after a lapse of nearly half a century since the discovery of etherization, and its successful demonstration in painless surgery by William Thomas Green Morton, M. D., at the Massachusetts General Hospital, Boston, October 16th, 1846. Then and there on that beautiful morning, was the first public demonstration of the discovery of anæsthesia of which any written or printed record exists.

Bishop Paley truly said, he discovers who *demonstrates*. Let it always be remembered that on the 15th of October, 1846, painless surgery was unknown to the medical profession on this vast globe; men, women and little children alike, were tortured by the surgeon's knife that they thereby might be healed. The frantic and agonized mother and father, with bleeding hearts, were compelled to see their darling and their loved ones stretched upon the operating table pinioned and helpless, with blanched cheeks and eyes of anguish pleading in vain for death.

This was the state of affairs on the 15th of October, 1846. Where was Dr. Long, with his priceless discovery which he claimed to have made four years before? Where?

On the 16th of October, the prayer of millions was answered by the immortal instrument of the Great Father—William Thomas Green Morton. If Dr. Morton had done nothing else but that one glorious *demonstration*, it entitled him to the love and gratitude of every human being on the earth, and the highest honors and reward that his country could

bestow upon him. After the 16th of October, 1846, the suffering patient who was compelled to submit to a surgical operation, slept through it as calmly as the infant upon its mother's breast.

I repeat, that on the 15th of October, 1846, painless surgery by anæsthesia was unknown to the medical profession; on the 16th of the same month, the glad tidings of the discovery of anæsthesia was on its way to all parts of the known world—not by any discovery of Dr. Long; not by any demonstration of Dr. Long; not by Dr. Jackson; not by Dr. Wells; not by any other man or men but William Thomas Green Morton. The board of eminent surgeons of the Massachusetts General Hospital, without an exception, awarded the discovery of anæsthesia to Dr. Morton, and so testified. If Dr. Long made this most important discovery in the history of the world, why did he not publish the glorious news? Why did he hide his light under a bushel for four long years? Echo answers why? Of course, no excuse could be given that would be accepted by an impartial jury.

“If the true story of the first discovery of anæsthesia has not been told in print,” then it *never* will be until some more impartial pen than Dr. Grandy's writes it. If history cannot be better written when all the events are fresh in the minds—when all the actors are still alive and on the stage to testify to the facts—it is a new theory for walking backward and consulting the *dead* instead of the living. While I would not for a moment wilfully do any injustice to the good name of Dr. Long or question his perfect honesty, I must be allowed to call in question the correctness of the statements made by his very partial friends.

It will be observed by those who have read Dr. Grandy's paper, that his witnesses were *not* reliable in their statements and were *very* forgetful, and were forced to acknowledge the treachery of their memories. If we are to accept Dr. Wilhite's testimony, and if he states the facts, he antedates Dr. Long in the discovery of anæsthesia, and is entitled to the honor. Dr. Wilhite says in 1839, he playfully etherized a negro boy to the point of *complete anæsthesia*. If his state-

ment is to be relied upon, why not *slide* his bronze statue into the National Gallery of Statues at Washington?

The claim of all the claimants was simply the discovery of etherization and through it *painless surgery*—nothing more, nothing less. Dr. Morton not only discovered anæsthesia; he *demonstrated* it in a case of capital surgery before a scientific body of surgeons. He published his exploits to the world. His discovery did not slumber four long years, while thousands were suffering torture from the surgeon's steel. It was not four hours after Dr. Morton's *demonstration* of anæsthesia before the "Glad tidings of great joy" were traveling in all directions. If Dr. Morton had followed Dr. Long's example, etherization might not have been known at this time.

Dr. Long did not seem to appreciate the great value of the discovery, and he made no claims until he was awakened from his four years of slumber by having the whole world singing the praises of Dr. Morton. "Honor to whom honor is due."

Dr. Grandy tells us that the claims of Dr. Long have been presented to the world by no less a champion than Dr. J. Marion Sims—an honored name, it is true—but who, nevertheless, made numerous mistakes in his statement of the discovery of anæsthesia, which are admitted and excused on the ground that Dr. Sims was on the eve of departure for Europe and had no time to correct his errors. It would seem from Dr. Grandy's paper, that Dr. Sims was led into his errors by the misstatements of Dr. Wilhite, who must have been a very forgetful man, as well as a very pliable one; for he was quite willing to give a certificate that his original statements were not true; and if they were not, I have a good right to question all of his other statements.

Dr. Grandy lays great stress upon some entries in Dr. Long's ledger—a charge against one James Venable for two operations upon his head, covering a period of time from January to June, and fifty cents worth of ether, the whole service amounting to *four dollars and fifty cents*. They must

have been very trivial operations, or ether and surgery must have been very cheap in Georgia.

According to Dr. Long's statement in January, 1845, he amputated two fingers from the hand of a negro boy; the first finger was removed while under the influence of ether, without pain, and was a success; but for some unexplained reason which we are left to conjecture, the second finger was amputated without ether, the boy suffering great pain. I may note my surprise that, after so successful an operation, the ether was not repeated in the case of the second digit. The above seems to cover the most important experiments and evidence presented by Dr. Long. I have no means, at this late day, of verifying the particulars stated, and I am quite willing Dr. Long should have all the benefit he can derive from his ledger.

Dr. Grandy makes one good point when he says: "If Dr. Long had promptly made public the results of his work, American medicine would have been spared the most tragically interesting chapter in its history." True, too true. Had Dr. Long done so, and demonstrated and published to the world the discovery which he claimed years after, he would not only have been entitled to great renown, but would have received the plaudits and the reward which would have been justly his; he would have conferred a lasting honor upon his profession and his country never equalled by any other man. Had Dr. Long published the discovery, he would have prevented the long and bitter fight of rival claimants which was only ended by their unfortunate deaths. If Dr. Long made the discovery which he claimed too late, and did not make it known to the medical profession, he is more entitled to censure than to praise.

Dr. Grandy says that "*when Dr. Long, in 1849, saw that he was anticipated in the matter of publication, he began at once to collect the evidence of his own work.*"* The paragraph quoted above requires no comment from me; it tells its own story. What would the Commissioner of Patents say to a man who

* The italics are mine.

claimed to have invented a valuable patent four years before—who had filed no caveat, made no claim for a patent, until anticipated by another who had no knowledge of a rival, if he should ask the Commissioner to excuse his procrastination and give him the patent, the honor and reward. Would such a party be entitled to any consideration in justice or equity? Certainly not. I think the illustration I have made is pertinent to Dr. Long's case, if we are to accept his evidence of priority in the discovery of anæsthesia.

Dr. Grandy says: "But thanks to Dr. Sims' clear presentation of the evidence, the medical profession generally, I believe, have recognized the precedence of Dr. Long's discovery." "It is a little surprising, therefore, that the author of a popular text-book on surgery should say, 'I hope I may be pardoned for saying that the evidence in Dr. Long's favor seems to me quite inconclusive.'" I think the author referred to only voices the judgment and conclusions of the great body of intelligent and well-read physicians of the United States, and I do not think Dr. Grandy is justified in saying, as he does, that "Dr. Long's priority in the use of ether is beyond question," for such is not the fact. More eminent men than Dr. Long claimed to have experimented with sulphuric ether before his time. Others beside, and before, Drs. Long, Wilhite, Groves, and Goodman, had "sporting" with ether, but none of them demonstrated painless surgery; that crowning glory was left for Dr. Morton.

After admitting the errors and mistakes of Dr. Sims' paper, and the source of his inspiration, I am surprised that a man of Dr. Grandy's intelligence and standing should say "that Dr. Long's priority in the use of ether is beyond question."

Dr. Grandy pays his respects to a writer in the *Medical Record* (January 7, 1893), and says: "He has read history to such little purpose as actually to state that Dr. Long himself never claimed to have demonstrated painless surgery by etherization."

"Will the gentleman from New England kindly tell us, then, what was Dr. Long's object in going before Congress

with his case when he saw that others were claiming the credit of the discovery.

"He might also explain Dr. Long's refusal to accept Dr. Jackson's proposition, and his instructions to Senator Dawson above referred to."

No, sir; you ask the gentleman from New England too much, and he would not impugn Dr. Long's motives. It is an old truism that it is much easier to ask than to answer questions, and if the gentleman from Georgia will pardon the gentleman from New England he will ask why Dr. Jackson put his claim before Congress as the discoverer of anæsthesia, and why did Dr. Wells make a like claim with the others? Not because they had any right to it, but because they wanted it. If I may presume why Dr. Long would not go into a co-partnership with Dr. Jackson, it was that he may have learned too much of him and his methods, or that two weak cases would not make one strong one. Is the gentleman from Georgia answered?

Dr. Long said that the publication of etherization did not bide his time, nor did it.

In regard to Dr. Jackson's claim to the discovery of anæsthesia, I have only to say that those who knew him best, and were his neighbors, gave him but little credence in his claim and statements.

As for Dr. Horace Wells, I am only surprised that in a city of so much intelligence and refinement as is justly claimed for the city of Hartford, Conn.; that it was possible to have erected in its public places a bronze statue to a man of such debased character, who never claimed to have discovered *etherization*, and only *anæsthesia* after Morton's demonstration at the hospital. Dr. Wells made some experiments with nitrous oxide gas in the extraction of teeth, which he abandoned for want of success. The distinguished surgeon, Prof. W. H. Van Buren, of the University of New York, who witnessed Wells' experiments, testified that they were failures. To show how some reputations are made, which have no good basis, permit me to refer to a paragraph in *Harper's Monthly Magazine* for January, 1893, by

Charles Dudley Warner, who goes out of his way to state an untruth and cast a slur on Dr. Morton: "How did it happen that one Morton got his name in the *Gazette* in connection with the great discovery of anæsthesia, which was made by Horace Wells, of Hartford?" Horace Wells neither made the discovery nor the demonstration of anæsthesia. He was a criminal in a New York prison, having committed a dastardly act against some woman of questionable character; and he died by his own hand.

Dr. Long presented his claims to Congress, but his evidence failed to convince the House that he was entitled to the credit of the discovery of anæsthesia, and he did not receive the coveted recognition; and why, let me ask, if his claims were as convincing as Dr. Grandy says?

Dr. Grandy calls special attention to the fact that Dr. Long's claims to the discovery "were presented to the world by no less a champion than the distinguished J. Marion Sims, himself." I willingly admit the high character of Dr. Sims, but the sources of his information, as has been shown, were not satisfactory and questionable. Dr. Sims was but one man. Dr. Morton's claims were allowed by many of the most eminent men of New England and the country: Hon. Daniel Webster, Rufus Choate, Hon. Horace Mann, Governor Morton, Charles Sumner, Oliver Wendell Holmes, Professor Agassiz. Prof. Henry J. Bigelow, Hon. Caleb Eddy and all of the principal surgeons of the Massachusetts General Hospital, and a host of well-known scientific men. Nothing but the most outrageous lying of a competitor, and not Dr. Long, defeated the acknowledgment by Congress of Dr. Morton's claims and reward for his great services in behalf of the whole world. "Let justice be done though the Heavens fall."

Dr. Grandy states the time, place and circumstances of Dr. Morton's death, but not correctly, and conveys a wrong impression. On the 15th day of July, 1868, Dr. Morton, who was in poor health, went to ride in Central Park, New York, with his wife; when on their return and near the gate, he complained to Mrs. Morton of feeling very ill. The

carriage was stopped, and he got out and sat down under a tree by the walk, became unconscious and was taken into St. Luke's Hospital, but was dead before his arrival, from a stroke of apoplexy. This statement I had from Mrs. Morton in 1893.

I have no more interest in the discovery of anæsthesia or the discoverer than any other member of the profession should have, and I have only taken up the matter as a duty which I consider we all owe to the world's greatest benefactor. From all the evidence I have been able to obtain, I am convinced that to Dr. William T. G. Morton belongs the credit, the honor and the reward for the discovery of etherization and painless surgery. I sympathize with Dr. Grandy in his labor of love for Dr. Long and his State, but I must differ with him in the merits and claims of the four claimants, two of whom had not a shadow of right to the title—*The Discoverer of Anæsthesia*.

With great respect I am yours truly,

W. R. HAYDEN, M. D.

Bedford Springs, Mass.

Analyses. Selections, etc.

An Act to Regulate the Practice of Medicine and Surgery in the State of Virginia.

1. Be it enacted by the General Assembly of Virginia, That from and after the passage of this act the following persons, and no others, shall be permitted to practice medicine or surgery in this State:

First. All persons who have practiced medicine or surgery in this State continuously for the period of at least five years prior to the passage of this act, but only such persons as have been assessed with a license tax as a physician or surgeon by some Commissioner of the Revenue in this State during each of the five years preceding the passage of this act shall be regarded as included within the provisions of this clause.

Second. All persons who have been duly examined, and

have been awarded certificates by the Board of Medical Examiners under the acts of January 31st, 1884, March 1st, 1888, and Chapter LXXVII of the Code, or the amendments thereto, and who have also otherwise complied with the requirements of the said laws.

Third. All persons who shall hereafter receive certificates from the Board of Medical Examiners of this State, as provided by section six of this act, and who shall also, in all other respects, have complied with the provisions of the same.

2. Any person shall be regarded as practicing medicine or surgery within the meaning of this act who shall profess publicly to be a physician or surgeon, and shall offer for practice as such, or who shall prescribe for the sick, or for those needing medical or surgical aid, and shall charge and receive therefor money or other compensation, directly or indirectly; but this act shall not apply to any midwife, dentist, commissioned officer or contract surgeon of the United States army or navy or marine hospital service in the performance of his duties as such, nor to any physician or surgeon residing in any State or Territory of the United States, or in the District of Columbia, called into consultation in a special case with a physician or surgeon residing in this State. Nor shall this act be construed as affecting or changing, in any way, the laws in reference to the license tax to be paid by physicians, surgeons, and dentists.

3. There shall be for this State a Board of Medical Examiners, consisting of one member from each Congressional District in this State, and two for the State at large, and, in addition, two homœopathic physicians from the State at large, whose term of office shall be four years, or until their successors are appointed and qualified. The term of office of the Board first appointed, after this act takes effect, shall commence on the first day of November, 1894, but the Board in office under the law in force at the time of the passage of this act shall constitute the Board of Medical Examiners under this act until a new Board shall be appointed under authority of the same.

4. The said Board shall consist of men learned in medicine and surgery, and shall be appointed by the Governor on the first day of November, 1894, and every fourth year thereafter, from a list of names to be recommended by the Medical Society of Virginia. He shall also appoint two homœopathic physicians, who may be nominated to him by the Hahnemann Medical Society of the Old Dominion, in the

manner hereinafter provided. Vacancies occurring in such Board for unexpired terms shall be filled in the same manner. Such recommendations shall be by vote of a majority present, at some meeting of the said Societies, and the same shall be certified to the Governor by the President and Secretary of such Societies: provided, however, in case the Governor shall consider any of the persons so recommended unsuitable, he may decline to appoint such person or persons, and communicate the fact to the presiding officers of the Society presenting the nomination, and such Society shall, within ninety days thereafter, make other recommendations in the manner hereinafter prescribed, which shall stand on the same footing in all respects as those first made: provided further, if such Society fail to make such recommendations prior to the time of appointment, or within the ninety days, the Governor shall appoint such Board, either in whole or in part, without regard to such recommendations. If any of said examiners shall cease to reside in the District for which he was appointed, his office shall be deemed vacant.

5. The members of the said Board shall qualify by taking the usual oath of office before the county or corporation court of the county or corporation in which they respectively reside, or before the judge of such court in vacation. The officers of said Board shall be a President, Vice-President, and Secretary (who shall also act as Treasurer), said officers to be members of and selected by the Board. Regular meetings of the Board shall be held at such times and places as the Board may prescribe, and special meetings may be held upon the call of the President and any five members, but there shall not be less than one regular meeting each year. Five members of the Board shall constitute a quorum. The Board may prescribe rules, regulations and by-laws for its own proceedings and government, and for the examination by its members of candidates for the practice of medicine and surgery.

6. It shall be the duty of the said Board, at any of its meetings, to examine all persons making application to them, who shall desire to commence the practice of medicine or surgery in this State, and who shall not, by the provisions of this act, be exempt from such examination; and when an applicant shall have passed an examination satisfactory as to efficiency before the Board in session, the President thereof shall grant to such applicant certificate to that effect. A fee of five dollars shall be paid to said Board, through

such officers or members as it may designate, by each applicant, before such examination is had. In case any applicant shall fail to pass a satisfactory examination, he shall not be permitted to stand any further examination within the next six months thereafter, or until the next meeting of said Board, nor shall he have again to pay the fee prescribed as aforesaid: provided, however, no applicant shall be rejected upon his examination on account of his adherence to any particular school of medicine or system of practice, nor on account of his views as to the method of treatment and cure of diseases: and provided, further, that when, in the opinion of the President of the Board, any applicant has been prevented by good cause from appearing before the Board, the President of the Board shall appoint a committee of three members, who shall examine such applicant, and may, if they see fit, grant him a certificate, which shall have the same force and effect as though granted him by the full Board, until the applicant shall have an opportunity to appear before the said Board, when, if the applicant fail to appear for examination, the President of the Board shall have authority to revoke said certificate, or, in any case, the President shall have authority, at his discretion, to grant a special permit to any applicant to practice medicine, until he shall have an opportunity to appear before the Board in session for examination, which said special permit shall be revokable at the discretion of the President.

7. The fund realized from the fees aforesaid shall be applied by the Board to the payment of its expenses, and to making a reasonable compensation to the President and Secretary.

8. Before any person who obtains a certificate under section six of this act may lawfully practice medicine or surgery in this State, he shall cause the said certificate to be recorded in the clerk's office of the county or corporation in which he resides in this State; or, if he resides in the city of Richmond, in the clerk's office of the chancery court of said city; but if he does not reside in the State of Virginia, he shall cause the said certificate to be recorded in the clerk's office of the county or corporation in which he offers to practice in this State, or in the clerk's office of the chancery court of the city of Richmond, if he offers to practice in said city. The certificate shall be recorded by the clerk in a book to be kept for that purpose, and it shall be indexed in the name of the person to whom the certificate is granted. The

clerk's fee for recording shall be the same as for recording a deed.

9. Any person who shall practice medicine or surgery in this State in violation of the provisions of this act shall be fined not less than fifty nor more than five hundred dollars for each offence, and it shall not be lawful for him to recover by action, suit, motion, or warrant, any compensation for services which may be claimed to have been rendered by him as such physician or surgeon.

10. All acts and parts of acts inconsistent with this act are hereby repealed.

11. This act shall be in force from its passage.

Treatment of Uterine Fibroids.

Dr. Augustin H. Goelet, of New York, N. Y., in a paper read before the New York County Medical Association (*Amer. Med. Surg. Bul.*, Jan. 1st, 1894,) makes a complete review of the subject. He says the important question which arises in dealing with these growths is, When is interference demanded, and what treatment is indicated? A careful review of the literature of the subject, and the opinions of those who are entitled to be regarded as speaking authoritatively, leads to the conclusion that the majority do not regard the removal of these tumors indicated unless they give rise to sufficient inconvenience to warrant the risk of the operation and the mutilation which it involves; that the mortality attending their removal is still too great, even in the hands of expert operators, to warrant its being lightly undertaken. If, then, it is possible to relieve the symptoms caused by these growths, the actual necessity for operative interference is narrowed down to a very small field.

The writer does not agree with certain ultra-gynæcologists, that these tumors should all be removed when they are small and cause no inconvenience, but he strongly urges that they should be submitted to treatment in this stage, because treatment yields the best results, when the tumor is small and of recent growth. The indication for the different methods usually employed are carefully reviewed—edelectricity, curettement, hysterectomy, and removal of the appendages.

Of electricity, he says that frequently a symptomatic cure is all that may be anticipated. The results that may be obtained by this method are classified as follows:

(1) Cure of co-existing endometritis.

(2) Loosening of adhesions between contiguous peritoneal surfaces.

(3) Relief of pain and pressure symptoms.

(4) Control of hæmorrhage.

(5) Arrest and some retrogression of the growth.

The writer takes a bold stand in favor of the vaginal puncture, believing it to be perfectly safe if properly done, and strict asepsis is observed; that is, if as much care is taken with this as with other grave surgical procedures. He believes that more success would have followed the use of this agent if puncture had not been abandoned as a hazardous measure. He believes, likewise, that it is important to discriminate in the choice of the pole to be employed against growths of different structure; just as important, in fact, as in dealing with such growths as warts, moles, and nævi, upon the external surface of the body; that is, when the structure is hard and fibrous, the negative pole should be selected, and that when it is soft and myomatous, the positive.

The writer lays stress upon the fact that both sub-peritoneal and sub-mucous fibroids, when pedunculated, are not amenable to treatment by this agent. He positively declares that though assertions have been made to the contrary in some quarters, the proper use of electricity in these cases does not complicate a subsequent operation for the removal of the tumor; but, on the contrary, its use facilitates the removal of adhesions and produces a marked improvement in the general condition of the patient. In fact, he often employs it for improving the local condition and for building up the health of the patient preparatory to an operation. It has been asserted that the symptoms return after discontinuing treatment, but the writer believes that when this occurs it is either due to a mistaken diagnosis or a faulty technique, which may be unavoidable.

Curettement, he thinks, is useful as a preliminary measure, but it does not yield a permanent result. In support of this opinion, attention is directed to the fact that the mucous membrane removed by the curette is rapidly reproduced, and the same causes for the hæmorrhage which previously existed still remain. For the control of hæmorrhage, when both these measures fail, he advocates ligation of the uterine arteries *per vaginam*, as suggested by Martin, of Chicago. He expresses no confidence in ergot alone in these cases, but regards it as a useful auxiliary in the treat-

ment of certain sub-mucous and soft interstitial myomata, when it is desirable to excite uterine contraction.

Goelet believes that the principal indication for hysterectomy is to be found in large sub-peritoneal and very large and hard and interstitial growths, which yield little, if at all, to any form of treatment. In these cases, even if the symptoms are relieved, their size is usually a source of so much inconvenience as to warrant the risk of their removal. This operation would also be indicated where treatment fails to permanently control the symptoms, when the tumor is situated unfavorably for treatment, and when complicated by disease of the appendages.

Removal of the appendages for the purpose of inducing an artificial menopause which may exert a favorable influence upon the tumor, is not regarded favorably. In his experience, as well as that of others, it is productive of very little good, and he strongly urges that when the abdomen has been opened, you should not stop short of removal of the whole tumor, unless it is impossible to separate it from its attachments.

The Inch-and-a-Half Incision and Week-and-a-Half Confinement in Appendicitis.

Dr. Robert T. Morris, of New York city, in a paper written for the meeting of the New York State Medical Society, February 8, 1894, states that we have recently learned four principal things relative to appendicitis, and he is now asking the members of the profession to accept a fifth point.

First. Appendicitis is of such common occurrence that every general practitioner has had many cases in his clientele.

Second. Multitudinous forms of abdominal inflammation are symptomatic of appendicitis.

Third. Statistics show that late operation does not give us much encouragement.

Fourth. Early operation, or operation in the interval between attacks, is an operation with trifling mortality (with none at all in his experience), but there is danger of ventral hernia resulting from the operation if a long incision is made.

The fifth point which Dr. Morris introduces is this: We do not need to make a long incision in appendicitis cases that are operated upon at the outset of the inflammation, or in interval cases, as a rule; and there will be no hernias and no permanent scars if the surgeon will accept as stand-

ard the author's abdominal incision, which is one inch and a half in length, the divided structures of the abdominal wall being united separately with fine cat-gut afterward. The author buries the stump of the appendix with Lembert sutures. His abdominal scar disappears entirely, so that at the end of a few months it cannot be seen. His death rate has been nothing at all in cases without pus, and physicians upon whom he depended for cases were now ashamed to have him find pus in the cases to which they called him. He did not know just where to look for danger in any of the cases operated upon at the time of his choice, but called attention to one danger in the use of carbonate of sodium for reversing peristalsis of the bowel. A note was at present going the rounds of the press to the effect that carbonate of sodium was useful in reversing peristalsis, but the author, in experimenting with rabbits, accidentally discovered that *carbonate of sodium, on touching the ileum, regularly produced intussusception in less than forty-five seconds.* The mechanism of the intussusception consisted in spasm of a belt of circular muscular fibres of the ileum and this portion was then quickly invaginated by the peristaltic action of the longitudinal muscular fibres. The author now *uses chloride of sodium* for reversing peristalsis in all of his operations.

Dr. Morris states that there is strong opposition to his plan of removing an infected appendix just as soon as discovered, but this opposition must fade away as soon as physicians generally could benefit from his experience, which was to the effect that appendicitis is an infectious exudative inflammation which does not disappear on disappearance of the symptoms. He had removed a large number of appendices from patients who felt perfectly well, but who could not obtain life insurance, or who feared recurrence, having had a previous attack of appendicitis. In all of these cases he found destructive processes in progress. Sometimes there was slowly progressing necrosis of the lymphoid tissue of the appendix; sometimes he had found tuberculosis or carcinoma insidiously beginning at the seat of the old inflammation; sometimes adventitious bands set snares for the bowel; and he had discovered that proliferating endarteritis, which must eventually lead to gangrene of the appendix, was common in very mild chronic cases. He had found proliferating endarteritis producing slow occlusion of the arteries of the appendix in three mild chronic cases in succession.

The author stated that surgeons were laughed at occasionally, because they found normal appendices at operation for supposed appendicitis, but he did not believe that proper examination was made of the specimens. He had removed two or three appendices, which were apparently perfectly normal, but the patient's symptoms all stopped after the operation, and when cultures of bacteria and microscopic sections had been made from these specimens, it was found that they had been dangerously infected. The mucosa and adenoid tissue were undergoing destruction by the colon bacillus.

The author stated that when his inch and a half abdominal incision was employed in removal of infected appendices, patients left the hospital at the end of a week and a half. If an incision two inches long were made, the patient would not be ready to leave until fourteen days after the operation, and if the incision were from two and one-half to four inches long, eighteen days would be required for repair. Consequently, he had adopted as standard the inch-and-a-half incision and week-and-a-half confinement plan, which left no hernia and an evanescent scar.

By operating immediately in acute cases, he did not mean on the following day, but on the following hour.

Physicians who do not accept this plan must lose a few cases that they do not expect to lose, and they must let very many patients suffer tediously and unnecessarily, but there will not be much further opposition because physicians are only too glad to do the very best thing as soon as they have learned what it is.

The insurance companies would not insure a patient who had ever had appendicitis, and whose appendix still remained, if they were to note the character of the adventitious peritoneal bands which form in these cases, and if they observed the persistence of appendicitis and of supplementary diseases in the appendices of patients who were thought to be quite well.

Book Notices.

An Introduction to the Study of the Bacteria. By ALBERT H. TUTTLE, Professor of Biology and Agriculture, University of Virginia. Anderson Bros. Charlottesville. 1893.

The fault of most text-books on bacteriology is either extreme simplicity or a too exhaustive treatment of the low forms of life, the study of which they are designed to aid. In this new work, Professor Tuttle has avoided with great skill both horns of the dilemma and produced a manual of great value. Although primarily intended as a laboratory guide for his own students, the book is one that any worker in bacteriology may well have at hand, and much information may be gathered as to the life-history of the micro-organisms, even by an advanced student of the subject.

The opening section on "The Place of the Bacteria in the Vegetable Kingdom," is full and accurate. The definitions of the great classes of plants, the general physiology and structure of plants, are stated with clearness and exactness; and, though the author makes no claims of originality, we are forced to think that the skill with which the well-known facts of this branch of science have been brought together, is more valuable than an originality that might be erroneous.

The chapters on bacterial technique are of great interest, though, if we may be allowed a suggestion, it would be well to go more into detail. To one accustomed to the methods of bactericulture, the instructions given are amply sufficient, but for the beginner they are hardly so explicit as would be desirable.

Under staining methods, Ziehl's, Kühne's, Löffler's, and Ehrlich's solutions are given, which are enough for ordinary purposes, while the differential methods are given in great detail. In the descriptions of spore staining, we miss Fiocca's method of staining with an ammoniacal alcoholic solution of an aniline dye and decolorizing with 20 per cent. sulphuric or nitric acid. This has given satisfactory results in our hands. Neisser's method, which is given, is similar in principle, though aniline water is used instead of ammonia. A valuable addition might be made at this point by giving a list of contrast stains, a matter about which the beginner is frequently at sea.

The third section of the book is of greatest general in-

terest, being devoted to the physiology of the bacteria, their medical, hygienic and economical relations, and the technique of the special bacteria. The modes of collecting specimens for examination in earth and air are thoroughly described, but in water some methods of great utility are omitted. When Prudden examined the water supply of Yale College, he allowed the water to trickle for hours through a filter of sterilized cotton, and made cultures from the residuum left on the filter. We have used the deposit on the bougie of a Chamberland filter, through which a measured quantity of water had been forced, for the purpose of detecting the bacillus typhosis of Eberth. Frequently so few bacteria of a given species are present, that some method as the above must be adopted before it can be said with certainty that a specific bacterium is not present. There is no mention of this filtration method for water in the book.

The work is one of which the distinguished author may be proud. Unfortunately, this first edition is marred by typographical errors, which have been noted in the "errata," and will doubtless be corrected in future issues. It is a thoroughly good book, and one that every bacteriologist should have close at hand.

C. M. B., JR.

Practical Treatise on Nervous Exhaustion—(Neurasthenia)—Its Symptoms, Nature, Sequences, and Treatment. By GEO. M. BEARD, A. M., M. D. *Edited, with Notes and Additions,* by A. D. ROCKWELL, A. M., M. D., Professor of Electro-Therapeutics, New York Post-Graduate Medical School and Hospital, etc. *Third Edition.* New York: E. B. Treat. 1894. Crown 8vo. Pp. 262. \$2 75.

The term neurasthenia, introduced into nosology by the late Dr. Beard, has come into popular as well as professional use to indicate the disorders marked by nervous exhaustion. It is what was called "American nervousness" some years ago. The present edition, under the revision of Dr. Rockwell, includes a most valuable chapter recapitulating some points in the etiology and pathology of neurasthenia as developed by recent investigation, which does much to remove some of the vague notions about some of the many vague expressions of the disease. It also emphasizes the statement that neurasthenia is curable under treatment—sometimes, indeed, becoming relieved by simply removing the causes that induced it. From beginning to end, there is much in the book to instruct and to interest the medical reader.

International Clinics. Edited by Drs JOHN M. KEATING, JUDSON DALAND, J. MITCHELL BRUCE, and DAVID W. FINLAY. Vol. II. *Third Series*, 1893 Philadelphia: J. B. Lippincott Co. 1893. 8vo. Pp. 363. Cloth. \$2.75.

By some error of express we received this volume after noticing Volume III. What we have said in commendation of other volumes of this "quarterly of clinical lectures on medicine, neurology, pediatrics, surgery, genito-urinary surgery, gynæcology, ophthalmology, laryngology, otology and dermatology by professors and lecturers in the leading medical colleges of the United States, Great Britain and Canada," applies equally to the volume now before us. The subjects of these lectures, all being studied from the clinical standpoint, gives to the "International Clinics" a practical value which is worth to the doctor much more than the subscription price. If the suggestion is worthy of adoption, it seems to us that improvement might be made were the editors to introduce subheads after the title of a lecture. For instance, in the excellent lecture on "Alopecia," it would save the reader time if he could see in a few lines of summary-heading that some causes of falling off or changes of the nails—such as typhoid fever, syphilis, tabes dorsalis, etc., are spoken of; that the evils of shampooing are discussed, etc.—especially when no reference is made in the "index" to these points.

American Text-Book of Gynæcology—Medical and Surgical—for Practitioners and Students. By Drs HENRY T. BYFORD, J. M. BALDY, EDWIN B. CRAGIN, J. H. ETHERIDGE, WILLIAM GOODELL, HOWARD A. KELLY, FLORIAN KRUG, E. E. MONTGOMERY, WILLIAM R. PRYOR, GEORGE M. TUTTLE. Edited by J. M. BALDY, M. D. *With 360 Illustrations in Text, and 37 Colored and Half-Tone Plates.* Philadelphia: W. B. Saunders. 1894. Royal 8vo. Pp. 713. (For sale by Subscription only. Cloth, \$6; Sheep, \$7; Half Russia, \$8.)

We are sure that it needs simply an examination of this magnificent work for each practitioner—whether he be a gynæcologist or a general one—to see for himself that this is the long-wanted book on gynæcology. Ample in its accurate illustrations, full in all of its details, authoritative in its every description, this "text-book" must stand for years as the one needed by doctors. The operations are fully illustrated, so that the reader may have a picture of the pro-

ceeding described in the text-book under his eye, and cannot fail to grasp the idea. All extraneous matter and discussions have been excluded, so that little else than what is necessary cumber the text. Everything has been brought up fully to date, and the work, as nearly as possible, represents the combined opinion of the ten specialists named in the caption of the book.

National Dispensatory. By ALFRED STILLÉ, M. D., LL. D., Professor Emeritus of Theory and Practice of Medicine and Clinical Medicine, University of Pennsylvania; JOHN M. MAISCH, Phar. D., Late Professor of Materia Medica and Botany, Philadelphia College of Pharmacy; CHARLES CASPARI, JR., Ph. G., Professor of Theoretical and Practical Pharmacy, Maryland College of Pharmacy; and HENRY C. C. MAISCH, Ph. G., Ph. D. *Fifth Edition, Enlarged and Revised* in accordance with the Seventh Decennial Revision of U. S. Pharmacopœia *With 320 Illustrations.* Philadelphia: Lea Brothers & Co. 1894. Royal 8vo. Pp. 1910. Cloth, \$7.25; with Ready Reference Thumb-Letter Index, \$7.75. Leather, \$8; with same Index, \$8.50.

Practitioners of medicine and pharmacists should know at once that the long wished for Fifth Enlarged and Revised Edition of the *National Dispensatory* is ready. Though it contains about 100 pages more than its predecessor, it is sold at the same low price because of the large demand. The very large first edition, fifteen years ago, was exhausted in six months. The popularity of each edition since has been due to their authoritative accuracy, completeness, and the convenient arrangements made in the book to readily find desired information. Before Prof. Maisch's death, he confided much of the pharmaceutical portion of the work to Prof. Caspari, Jr., while the therapeutical department of the work has been brought thoroughly up to date by Prof. Stillé, who has included critical statements of the value of even the newest remedies. The "therapeutic index" gives practical suggestions under the various diseases arranged in alphabetical order; in fact, the vast total of references numbers about 25,000. This Edition contains many new tables, lists, and descriptions of new processes, tests, etc., which practically make the work indispensable to all who have to deal with any of the medical sciences. All the sweeping changes in the new U. S. Pharmacopœia are thoroughly incorporated, with official authority of the Committee of Revision. In short, it is an encyclopædia of the latest and best therapeutical knowledge, arranged alphabetically as to the names of drugs, etc.

Syllabus of Lectures on Practice of Surgery. By N. SENN, M. D., Ph. D., LL. D., Chicago, Professor of Practice of Surgery and Clinical Surgery, Rush Medical College, etc. Philadelphia: W. B. Saunders. 1894. Long 8vo. Pp 221. Flexible Cloth, \$2.

Dr. Senn has done a valuable service to teachers and review students of surgery in arranging this "Syllabus of Lectures," in conformity with the *American Text-Book of Surgery*, which has become the standard authority of this country. In the few instances when the Text-Book seemed wanting, the compiler has filled the gaps. Such a book saves much annual trouble to the teacher who depends on his notes of last session for his systematic course of lectures or quizzes during the succeeding session. The fact that Dr. Senn uses this Syllabus himself makes it go without the saying that the work has been done specially well.

Editorial.

Revised Law Relating to the Virginia Board of Medical Examiners.

In the department of "Analyses, Selections, etc.," we give the text of the recent enactment of the General Assembly of Virginia, approved by Governor O'Ferrall during January, 1894. Some radical changes have been made in the old law with which Virginia subscribers at least should become familiar. It reduces the membership of the Board from thirty-two regular practitioners and five homœopaths to twelve regular practitioners and two homœopaths. It allows five members of the Board to be a quorum. It requires only one regular meeting during each year, instead of two as formerly. It permits the Board to appoint the dates and places of its meetings, instead of requiring one semi-annual session to be held in Richmond during April, and one at the time and place of the annual session of the Medical Society of Virginia, etc. It leaves the old law in effect until November, 1st, 1894. It makes unmistakable the law which was always intended to exclude quacks and charlatans and unqualified itinerants from the rights of practitioners in this State until they have passed satisfactory

examination before the Virginia Board of Medical Examiners. All of these and other details are undoubtedly good points.

There are, however, some unfortunate provisions in the law. One is in naming November 1st, instead of January 1st, and each four years thereafter as the time for commissioning the new Board; for that will require the Medical Society of Virginia to meet during October of these years. The Medical Society of Virginia has several times met after November 1st; in fact, during the recent session in Charlottesville, it was voted to hold the next meeting in Richmond during November, 1894; but now the Executive Committee will have to assume authority to convene the regular session during October, 1894. Another unfortunate provision is, that the filling of vacancies in the Board, if occurring earlier than ninety days previous to an appointed date of a session of the Society, will require that the Medical Society of Virginia shall be called in extra session simply to recommend one person to fill a vacancy—notwithstanding eleven other regular members are left on the Board, and notwithstanding a quorum of the Board is but five of its members. “Such recommendations [to fill vacancy] shall be by vote of a majority present at some meeting of said societies.” An extra session of the Medical Society cannot be called under one month’s notice to its eight hundred members; and the expense of such meeting to the Society and its members, simply to nominate a suitable successor to fill the one vacancy in the Board, will be something prodigious. But this is not all. If immediately after the extra session another vacancy occurs in the Board, or if the Governor declines to commission the doctor recommended by the extra session, another extra session of the Society will have to be called at like waste of time and expense; and this may be repeated several times during each year. It would have been far better to have left out the ninety days provision altogether, or else to have provided that a committee of the Society should fill the vacancy either temporarily or permanently as to the remainder of the term.

We call attention to these unfortunate technical provisions simply to have it kept in mind that the law should be changed during the next Legislature as to these details. We are afraid it is too late to have the changes made during the present session of the General Assembly.

Spring School of Medicine, Richmond, Va.

We take pleasure, while calling attention to the advertisement on page —, in commending the objects and the Faculty of this new Spring School of Medicine, to be opened in the buildings of the College of Physicians and Surgeons, Richmond, Va., during April, 1894. The Faculty is an independent organization of trained and popular medical teachers of this city, and has established a curriculum, fees, etc., of its own. It has simply arranged with the College authorities to utilize during the six or seven weeks' term its halls, its laboratories, its dispensaries, its amphitheatre; and the vast amount of clinical material which would otherwise be unused for teaching purposes during these weeks. This being an independent organization, it will receive medical students from any part of the country—without reference to their being matriculates or prospective matriculates of the College of Physicians and Surgeons, Richmond, Va. We are glad to learn that already this Spring School of Medicine has a most flattering promise of success, and of usefulness to such medical students as may wish to pursue courses of study after most of the Colleges have closed their Winter sessions. Graduates who are preparing for examinations before State Boards of Medical Examiners, the Army or Navy, or the Marine Hospital Service, Medical Boards of Examiners, etc., would do well to take this Spring course. Practitioners who wish to go over a course of laboratory or clinical tuition in some special department would do well to attend this thorough course of instruction.

An Army Medical Board

Will be in session at Washington city, D. C., during April, 1894, for the examination of candidates for appointment to the Medical Corps of the United States Army, to fill existing vacancies. Persons desiring to present themselves for examination by the Board will make application to the Secretary of War before March 15, 1894, for the necessary invitation, giving the date and place of birth, the place and State of permanent residence, the fact of American citizenship, the name of the medical college from which they were graduated, and a record of service in hospital, if any, from the authorities thereof. The application should be accompanied by certificates based on personal acquaintance, from at least two reputable persons, as to his citizenship, character and habits. The candidate must be between twenty-two

and twenty-eight years of age, and a graduate from a regular medical college, as evidence of which, his diploma must be submitted to the Board. Successful candidates at the coming examination will be given a course of instruction at the next session of the Army Medical School, beginning in November, 1894.

Further information regarding the examinations may be obtained by addressing the Surgeon General, U. S. Army, Washington, D. C.

The above notice is signed by "Geo. M. Sternberg, Surgeon-General, U. S. Army," and issued in connection with a "Circular of Information," which states that "there will probably be six vacancies in the Corps to be filled."

It seems unfortunate that the date by which applications must be made (March 15th) precedes by about two or three weeks only the time of graduation in most of the regular medical colleges of high standing in the country.

Substitution of Drugs.

That fraudulent imitations or substitutes of prescribed drugs, etc., were made by some disreputable pharmacists we of course surmised. But we had not supposed that anything like forty-five per cent. of the licensed pharmacists of such a city as Chicago were such frauds as to practice adulterations and substitutions. The Lambert Pharmacal Co., as the profession knows, prepares a most useful compound known as "Listerine." It came to the knowledge of the St. Louis manufacturers that imitations of Listerine were being sold in Chicago, and they decided on a thorough examination. A trusted employee of the Lambert Pharmacal Co. was detailed to go to Chicago, and in person to buy from the pharmacists there quantities of Listerine. He bought from as many Chicago pharmacists 479 samples of what purported to be Listerine. After careful tests, it was found that 251 were genuine Listerine,

204 contained no *Listerine* whatever,

24 contained Listerine diluted with water or glycerin.

Among others against whom the Lambert Pharmacal Co. has obtained "orders of perpetual injunction" with damages, etc., we are the more surprised to find the name of such a firm as the Auditorium Pharmacy Co. Under such a showing, is it not time that physicians and patients alike were inquiring as to the personal honesty as well as pharmaceutical capability of pharmacists that they do not know to be honest and upright in all their transactions around the corner behind the counter?

Largest Head on Record—Wonderful Freak of Nature.

One who signs himself "A Florida Friend connected with *Florida Health Notes*," Jacksonville, sends us the appended clipping, descriptive of the most wonderful freak of nature, so far as relates to a human being, that we have ever seen noted:

The following is from the Madison correspondent of the *Florida Citizen*: "Nine years ago a negro in this county named Dan Tysen was shot near the Georgia line by another negro. He was sitting by his wife at the time, and his head was literally torn off. A few months later his widow gave birth to a boy, who will be nine years old next June. That boy is a wonderful freak of nature. From his neck to his feet he measures about one foot six inches; his limbs are small and wasted, yet he weighs 127 pounds. This remarkable weight is due to his head, which measures one foot and six inches in diameter, and four feet and one-half inches in circumference. Certainly the child can neither stand nor sit, but keeps in lying posture and laughs, talks and sings like any other child. Its method of locomotion is to roll on his head by throwing his legs over it. He is in perfect health."

Dr. Joseph Price, of Philadelphia,

During his visit to Richmond in January, held the Clinic for Prof. Hunter McGuire in the Amphitheatre of the College of Physicians and Surgeons—over two hundred medical students and practitioners of the city being present. His subject presented multinodular fibroids of uterus,—which allowed him an opportunity to demonstrate several points of practical interest in connection with the operation he prefers for removal of the uterus in such cases. Of course Americans are proud of his wonderful record in abdominal surgery especially.

A Four Years' Course at Jefferson Medical College.

At a meeting of the Faculty of Jefferson Medical College, held on January 8th, 1894, it was unanimously resolved to institute a compulsory four years' course with the session of 1895-96. This step was taken in order that the large clinical service of the Jefferson College Hospital (350 cases a day) might be utilized to the fullest extent in carrying out the desire of the Faculty to provide advanced medical education of a practical character.

International Medical Congress, Rome, 1894.

The Eleventh International Medical Congress, which was postponed from 1893 on account of the apprehension of cholera, etc., will be held in Rome, Italy, March 29th—April 5th, 1894, inclusive. All American doctors with adults of their immediate families and all medical students proposing to attend should write for particulars to the American Secretary, Dr. Abram Jacobi, 110 W. 34th street, New York, N. Y., before February 15th, 1894; after that date inquiries should be addressed direct to "The Secretary-General, XI International Medical Congress, Genoa, Italy." The Hamburg-American Packet Co. will sell tickets 25 per cent. off regular fares. In London or Paris or Naples, Thos. Cook & Sons, through their offices, will assist applicants in arranging routes. From Paris or Havre, one full fare to Rome and free return on certificate plan. This will be a Medical Congress of great value.

Board of Examiners for Marine Hospital Service.

A board of medical officers will meet Monday, April 16, 1894, in Washington, D. C., for the purposes of examining candidates for appointment to the grade of Assistant Surgeon in the Marine Hospital Service. For further information address the Supervising Surgeon General, U. S. Marine Hospital Service, Washington, D. C.

Obituary Record.

The Late Dr. James H. Murray.

I ask the privilege of recording, in the *Virginia Medical Monthly*, a brief tribute to the memory of my father-in-law, the late Dr. James H. Murray. Dr. Murray lived and practiced medicine in Fauquier county, Va., for a number of years. He was also, throughout the great war between the States, a surgeon on active duty in the Army of Northern Virginia; and, during a part of many seasons, he was Resident Physician at Rawley Springs. It seems fitting, therefore, that a tribute to his memory should find a place in a Southern journal devoted to the interests of the great profession, to which his life was devoted, and which his talents adorned.

Dr. Murray died at his home on West River, Maryland, on the 6th of November, 1893, in the 78th year of his age.

He was born near the place of his late residence. Having graduated in medicine in the Maryland University in 1837, he at once entered upon the practice of his profession at the place of his birth. He immediately achieved success, and the highest reputation for skill, ability and professional attainments. In a short time, the Chair of Anatomy became vacant in the Maryland University; and Dr. Nathan R. Smith, the most conspicuous member of the Faculty, and afterwards a life-long admirer and friend of Dr. Murray, visited him at West River to urge upon him personally the acceptance of the vacant chair. Dr. Smith urged that his talents were buried in the comparative obscurity of a country practice, when he ought to aspire to the first place in American surgery. Such was Dr. Murray's attachment for his home, and so decided his preference for country life, that he could not be induced to think of the change; and the high honor to so young a man was declined with grateful acknowledgments to his distinguished friend.

At the beginning of the War, Dr. Murray, then living near Warrenton, Va., was appointed surgeon of the Forty-Ninth Virginia Regiment, raised by Ex-Governor William Smith, and of which his brother, Edward Murray, afterwards Inspector-General on General Lee's staff, was Lieut. Colonel. After the battle of Seven Pines, Gen. D. H. Hill detached Dr. Murray from duty with his regiment, and instructed him to organize for his corps a tent field hospital. So great was Dr. Murray's success with this hospital that, after Sharpsburg, he was ordered to Lynchburg for hospital duty by the Medical Director of the army and accorded the privilege of taking with him the Assistants who had been with him in the tent field hospital, which was now broken up, and Gen. Hill ordered to the West. At Lynchburg, Dr. Murray was put in charge of Pratt Hospital, the largest at the Post, where he served with great distinction and success until, with the surrender of the Army of Northern Virginia, the War closed. Thereupon Dr. Murray returned to Warrenton, and practiced medicine, with great reputation and gratifying success, until, in failing health, he returned to his early home on West River, and lived in retirement until his recent death.

Dr. Murray was a most able physician, and his surgical talents were of the highest order. He was a perfect mechanic and a thorough anatomist; and in all his operations knew precisely what he was going to do, and how he intended to do it; his execution was rapid, and his technique original and brilliant. Never, in any operation, was he, for

a moment, at a loss. The success of his surgery was remarkable and, in the highest degree, gratifying; and he performed nearly all the most difficult operations. In military surgery, he practiced a most scrupulous asepticism, as contradistinguished from antisepticism. He never used a suture in closing a wound, believing them a fruitful source of septic infection; and for the same reason he utterly discarded sponges and water dressings. Even in major amputations he closed the wounds with adhesive strips, to the exclusion of sutures, and covered the incision with clean dry lint only—supporting the stump with bandages, in the application of which he displayed extraordinary skill.

In the major amputations, Dr. Murray always formed oval flaps, cut from without inwards at a single sweeping stroke; and to facilitate drainage, the line of incision was vertical, and not horizontal, across the face of the stump. I never saw amputations so dexterously and rapidly done by any of the great surgeons I have seen operate. In fact, in all his operations of every kind, his execution was strikingly brilliant and rapid, and its accuracy precise and minute. In the management of fractures and dislocations, however, his great mechanical skill and exact anatomical knowledge were most strikingly displayed. In my humble judgment, it is in the management of this class of injuries that the highest skill of the surgeon is displayed.

In the application of splints and bandages, Dr. Murray possessed the highest skill and critical judgment, invariably securing to the patient the greatest possible ease and comfort, and the least possible resulting deformity.

In general-intellectual gifts and attainments, Dr. Murray was a man of superior mark; and all the beautiful traits which adorn the character of the Christian gentleman were united in him.

In all professional relations, he was, at all times, unassuming, courteous, and magnanimous, especially so towards the younger men of the profession—always acknowledging a rising reputation with generous enthusiasm. His talents were said to have been buried in the country, yet, in extreme cases, he was often called to distant States and cities by those who knew the value of his skill in those great emergencies when hope hovers doubtfully between life and death.

Dr. Murray's most striking mental characteristic was his faculty, resembling the precision of an instinct, of reducing all questions and problems to their simplest form; and resting, with unalterable fixedness of conviction, on the result-

ing conclusion. This great faculty was most beautifully displayed in the simplicity of his Christian faith. He answered every theological dispute, and silenced every rationalistic doubt, with brief and earnest simplicity. "After all versions and revisions, the everlasting gospel remains, and will remain, forever true: he that believeth on the Lord Jesus Christ shall be saved." On this faith he himself, consciously facing the great mystery of death, rested completely satisfied. Dead at a ripe old age, he has left a name unsullied; a memory gratefully cherished by very numerous friends and admirers, who loved and trusted him as it is given to few men to be loved and trusted in this world.

Cumberstone, Md.

M. G. ELLZEY, M. D.

Dr. James Parrish

Died at his home in Portsmouth, Va., January 21st, 1894. His health had been giving way for some months on account of some kidney trouble. Few practitioners could be more popular with their patients than was he; and his appreciation by the profession was manifest by the number and the character of professional positions he has held. He joined the Medical Society of Virginia in 1871, attended several sessions, always favored steps taken for the elevation of the standard of medical education, for the promotion of the welfare of the people, etc. Some years ago, he was elected a member of the Medical Examining Board of Virginia, which distinction he held till his death. On the re-organization of the Virginia State Board of Health during the spring of 1893, he was appointed by Governor McKinney to serve as a member, and as such he attended all of the quarterly meetings, regularly held, until his death. During the regularly quarterly session of the State Board of Health held in Richmond, January 30th, a committee was appointed to prepare a suitable memoir for the records of the Board—Prof. Paul B. Barringer, M. D., of the University of Virginia, chairman of the committee.

Dr. Armistead R. Mott

Died at his home in Leesburg, Va., January 20th. He was one of the most prominent physicians of his section of Virginia. He served in the Confederate army as chief surgeon on the staffs of Generals Robert Ransom and D. H. Hill. He was the father of Lieutenant T. B. Mott, United States army. On account of impaired health he had for the last two years relinquished practice. He was a Fellow of Medical Society of Virginia.

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Original Communications.

ART. I.—Tuberculosis of the Bladder—Drainage and Rest.*

By HUNTER McGUIRE, M. D., LL.D., of Richmond, Va.,

EX-PRESIDENT OF AMERICAN MEDICAL ASSOCIATION; OF SOUTHERN SURGICAL AND GYNÆCOLOGICAL ASSOCIATION, ETC.; CLINICAL PROFESSOR OF SURGERY, COLLEGE OF PHYSICIANS AND SURGEONS, RICHMOND, VA.

Four years ago, I found one day in my hospital a young man, who gave me the following history: He was twenty-two years old; had had occasional symptoms of trouble with his bladder for about two years; had never had gonorrhœa or syphilis. His mother, aunt, and two sisters had died with consumption.

Two or three months ago, during the act of passing water, he was suddenly seized with pain in the end of his penis, and found the last few drops of urine contained blood. Frequency of micturition was the next symptom, and this last became gradually so urgent, that he sat for hours on a chamber-pot, discharging every few minutes about a teaspoonful of urine. He was in this position

* Remarks made before the Southern Surgical and Gynæcological Association in New Orleans, November, 1893.

when I first saw him, the vessel being on the floor, and his thighs flexed on his body until his chin rested on his knees. He said that no other position gave him as much comfort during "his spell." The symptoms in the end of the penis, the occasional appearance of blood, and frequency of making water, were like those of stone. Unless he was under the influence of morphine, the pain kept him awake for hours at night, and he was compelled to get up every few minutes and make water. I found he had periods of rest just as patients do in cases of stone in the bladder. He went sometimes a week or more without pain or very frequent micturition; sometimes the respite lasted only a day or two. During the intervals of his attacks, exercise did not hurt him; he could ride on horseback, jump out of his carriage, without bringing on an exacerbation of his symptoms. I found, during an interval of rest, that his bladder had diminished in size, and the evacuations at his best were more frequent than natural. The urine was odorless, contained some pus, and was slightly acid. In the epididymis of the right side a slight swelling was discovered, which, when opened, discharged tubercular-looking pus. In examining the prostate through the rectum, I could feel a number of hard, shot-like bodies. This man had the history and symptoms of tuberculosis of the bladder.

It occurred to me that if I could put this man's bladder at rest, that I would give him at least great temporary relief. I made a supra-pubic opening, as you would do for stone, introduced a drainage tube, and the effect for good was almost immediate. The urine was drained off as fast as it was poured into the bladder, and the tenesmus ceased. In four or five months the man was well, and has remained so ever since, it being now nearly four years since the operation.

I have had four other cases like the one described, in which I have operated and drained. In two of them death soon followed the operation. In both of these cases the tubercular change in the bladder was extreme. In both the bladder was contracted and the mucous membrane almost entirely destroyed. One died from exhaustion following the operation; the other in a few weeks from general tuberculosis. In both the suffering was lessened by the drainage. The other two of the last four cases got well—one

after a drainage of ten or twelve months; the other still keeps the artificial track open, and although relieved of all bad symptoms, declines to let it close up.

I mention these cases, and the success that I have had in drainage and rest of the bladder in tuberculosis of that organ, to induce others to try the process.

ART. II—Diseases of the Skin.

By JAS. C. McGUIRE, A. M., M. D., of Washington, D. C.,

FORMERLY LECTURER ON DERMATOLOGY AT THE HOSPITAL SCHOOL OF MEDICINE,
LOUISVILLE, KY.; DERMATOLOGIST LOUISVILLE CITY HOSPITAL, ETC.

In a short treatise, such as this, it is impossible to give even a brief description of the many diseases that may effect the skin. This may be better appreciated when we understand that the American Dermatological Association recognizes over a hundred diseases that may affect this organ, many of them subject to manifold variations. Eczema or tetter may be of the erythematous, papular, vesicular, pustular, or squamous form. There may be an excessive exudation of serum, when it is designated as eczema rubrum or madidans, each entirely different in appearance, and requiring different methods of treatment.

It is my purpose to mention only a few of the more common affections of the skin, and to give a very brief outline of treatment, especially in the way of home remedies.

There are certain terms in use, in describing the different morbid changes in the skin, known as the **ELEMENTARY** or **PRIMARY LESIONS**.

A *macule* is an alteration in the color of the skin, that is neither elevated nor depressed beyond the surrounding surface; an example is found in the rash of measles.

Papules are more or less solid elevations, varying in size from a pin-head to a coffee-bean—common example in papular eczema.

Wheals are red or white elevations, of irregular shape;

they appear and disappear suddenly, and are accompanied with severe itching and tingling sensations; the typical wheal occurs in urticaria or hives.

Tubercle, a solid elevation of the skin, usually larger than a papule, but differing from the latter in that it is buried deep in the corium, only a portion of it showing above the surface of the skin.

Tumors are soft or solid growths; still larger than the tubercles. They may be located within or beneath the cuticle.

Vesicles are elevations of the outer layer of the skin filled with serum; the most common examples are found in eczema and herpes.

Pustules are small collections of pus, situated under the epidermis, varying in size from a pin-point to a split pea; typical examples seen in small-pox and acne.

Bullæ, or *blebs*, are elevations filled with fluid, larger than vesicles; they occur after scalds and burns, and are seen in the disease known as pemphigus.

SECONDARY LESIONS are changes that are produced in the elementary lesions, or are due to accidental causes.

Scales are detached portions of epidermis.

Crusts are formed by the drying of exudations or secretions upon the skin.

Fissures are cracks in the cuticle, such as are seen in chapped hands and in eczema of the palms.

Excoriations are due to the loss of the superficial layers of the skin, usually due to scratching.

Ulcer is an excavation of the skin caused by disease.

Scars or *cicatrices* are new formations of fibrous tissue that supply the place of lost material.

ECZEMA is the most common of all cutaneous diseases. In this country, in 52,000 cases of skin diseases, it occurred in 16,205 cases, or over thirty-one per cent. The disease is characterized by certain symptoms, that are more or less present in all cases—redness, swelling, infiltration, itching, exudation of serum, crusting or scaling. The itching is so intolerable at times that the poor sufferers beg to be put out

of their misery. I have often heard them wish for death, or beg to have the part where the disease is situated amputated.

As to the *causes* of the disease, but little is known. Anything that irritates the skin, either from internal causes, such as digestive disturbances, or from without, will develop the disease in those who are predisposed to it.

The *treatment* should consist in correcting any derangement of the system that may be present. There is no specific remedy. Arsenic is harmful in the majority of cases. Many can be cured by local treatment alone. Soothing applications should be made in acute cases, while stimulants, as a rule, should be reserved for the more chronic conditions. It is impossible to give even an outline of treatment here. Prof. Bulkley has written a book of over three hundred pages about the management of this disease alone.

Itching may sometimes be relieved in acute cases by spraying the following lotion upon the parts: Carbolic acid, thirty grains; oil of peppermint, five drops; glycerin, one drachm; water, two ounces; followed by a dusting powder containing a little camphor, or the application of zinc ointment. The infiltrated variety that so frequently occurs upon the legs, especially if accompanied by varicose veins, may often be relieved by wearing Martin's rubber bandage during the day and a dilute tar ointment at night. Unna's plaster muslin of tar and zinc or zinc alone will relieve some chronic cases.

URTICARIA, HIVES or NETTLE RASH is unfortunately too well known to need an extended description. Wheals suddenly appear, accompanied by much swelling, redness, intense itching, and stinging. The whole body may be affected, but it is usually limited in extent. An outbreak may occur in those susceptible to the disease by partaking of almost any article of diet, depending upon the idiosyncrasy of the individual; probably shell-fish, cheese, pickles, and berries, are the most frequent cause. Among medicinal articles causing the disease are chloral and opium; the former is more apt to produce it if stimulants are taken at the same

time. This is also true of phenacetine; moral emotions may produce it, such as anger or fear.

As to treatment, first of all, the cause must be removed; if it is due to indigestion, an emetic or cathartic should be given. Locally, an alkaline bath, made by adding a cupful of cooking soda to about thirty gallons of water, should be taken, followed by lotions, such as the one containing carbolic acid, as given under the treatment of eczema. The patient should avoid everything that may irritate the skin, in the way of food, medicine, or clothing. In the interval, salicylate of soda in twenty grain doses, or quinine, may be tried.

ACNE.—Notwithstanding the majority of physicians speak and think of acne as an affection of altogether minor importance, the number of persons between the ages of thirteen and twenty who altogether escape some one of its manifold annoyances is very small. Of all skin diseases, there are fewer that cause greater disfigurement, or, in many instances, give livelier mental distress to the sufferer. Some years since, a man twenty-five years of age, the subject of the severest form of acne for twelve years, came under my care. His former physicians had assured him that time alone could affect a cure, and advised simply that he let his face alone, make no attempt to "drive in" the disease; abandon the use of soap in washing; and on no account touch tobacco in any form.

Between the suffering from the disease and the advice, he had grown to be so wretched that he seriously contemplated suicide. After two months of suitable treatment the acne was cured, but, unfortunately, the disease had lasted long enough to mark the patient's face with scars as disfiguring as those following small-pox. The subjective symptoms of the disease being less annoying than those in eczema, we meet with a fewer number of cases; but there is no doubt if the lighter forms came under our notice, it would be found to occur just as frequently.

In 14,007 cases of skin diseases reported in 1885, acne occurred in eight per cent.; in 500 cases observed by myself, there was nine per cent.

In the great majority of cases, acne is a reflex affection—depending upon the disturbance of some internal organ—and not a primary disease of the skin itself. It is an inflammatory disease of the sebaceous glands, and usually first appears about the age of puberty in the form of papules, pustules, and tubercles, and is frequently accompanied by the oily form of seborrhœa, and by the little black heads known as comedones.

The lesions commonly appear on the face alone, but there are cases where they are entirely confined to the back.

In this affection, as well as in other cutaneous diseases, great benefit may result from relieving the disordered skin by securing free action of the kidneys.

The diet should be regulated—hot bread, melted butter, candy, pastry, and stimulants in all forms, should be avoided. Patients have informed me that they could bring out a crop of pimples by eating anything sour.

Though the constitutional condition of the patient should be looked after, it is impossible to cure the majority of cases without local treatment; the gland should be relieved by mechanical means of the hardened sebaceous matter which distends them and acts as an irritant. After opening all the pustules and removing the black heads, the face should be bathed in hot water, as hot as the patient can bear.

Sulphur ointment, one drachm to the ounce, with the addition of about fifteen grains of salicylic acid, is a good application. If the face is much inflamed, a soothing lotion should be used, such as oxide of zinc, one drachm; glycerin, one drachm; and rose-water, two ounces; but in a disease such as this, the patient should seek the advice of a competent physician; the mildest looking cases are, at times, the most difficult to cure.

CORN is a circumscribed hypertrophy of the epidermis, usually found upon the toes; the pain is produced by the pressure of this hardened epidermis upon the sensitive papillæ of the deeper portion of the skin. It is best treated

by applying very hot water, and then scraping or cutting till the corn is on a level with the surrounding skin; a very good application is salicylic acid, a drachm to the ounce of collodion.

The lesions produced by bed-bugs, mosquitoes, bees, gnats, wasps, and midges, are best treated by means of dilute ammonia water, or a lotion of carbolic acid, fifteen grains to the ounce, with the addition of a few drops of oil of peppermint.

WARTS are due to hypertrophy of the whole thickness of the skin. Care should be taken in cutting off these growths, as they contain blood vessels that are apt to cause more or less hæmorrhage. The application of the salicylic acid in collodion will sometimes remove them. They may be treated with a solution of tannin in alcohol about one drachm to the pint. Many applications have the reputation of quickly removing warts from the fact that they will, at times, quickly disappear without apparent cause.

RINGWORM is a contagious disease, caused by a vegetable parasite known as the trichophyton fungus. When it attacks the body it is designated as *trichophytosis corporis*, or *tinea circinatus*; when on the scalp, *trichophytosis capitis*, or *tinea tonsurans*; if confined to the bearded portions of the face and neck, *trichophytosis barbæ*, *tinea sycosis* or barber's itch; when located in the axilla or groin, *eczema marginatum*. It takes on different appearances, according to its location; on the body, it begins as a small, red, scaly spot, spreading out peripherally, and clearing up in the middle; in this way rings are formed.

Trichophytosis capitis is peculiar to children, as it seldom, if ever, affects adults. It usually commences as a small, scaly spot, spreading in the same way as in the body. The patch, or patches, are covered with short broken off hairs, that are characteristic of the disease; if it becomes very severe, the spots swell up and become boggy, when it is designated as *kerion*.

Trichophytosis barbæ has very much the same appearance

as on the scalp; there are usually some pustules or a group of nodules, the size of split peas or larger. They may discharge a sticky matter, but very rarely suppurate.

When located in the body, the disease is comparatively easy to relieve; painting with tincture of iodine a few times is usually all that is sufficient. In so-called *eczema marginatum*, the treatment must be a little more vigorous. Bulkley recommends pure sulphuric acid scrubbed on the part.

Such a vast number of external remedies have been advised for the cure of ringworm of the scalp that even a mention of different plans of treatment, so highly extolled by writers on dermatology, would be impossible in a brief article such as this. In most cases, the disease resists treatment most annoyingly, and persists for a long time. As the disease results from a parasite that makes its home in the hair follicles and hair itself, it is evident our chief aim in treatment is to destroy this fungus and allay any irritation that it may have caused. The application of parasitocides alone are not all that is required, but it is absolutely necessary to resort to epilation in the great majority of cases. As many hairs as possible are to be removed at each sitting, followed by the parasiticide. To test the efficiency of the different remedies advised, I have tried a variety of methods. In five cases, tar and iodine, in the form of Coster's paste, was first used. This was applied every five days; in two weeks, two of these cases were pronounced cured. In the remaining three cases bichloride of mercury in alcohol, one grain to the ounce, was substituted; one of these was cured within one week. The remaining two cases were then treated with chrysarobin pigment, and cured in one month.

Chrysarobin, as is well known, is derived from goa powder, and though long used in South America as a local remedy in skin disease, it was not till about fifteen years ago that the attention of the general profession was called to its efficiency as a parasiticide. The chief objections to its use are that it may produce too much irritation and stain the

skin a dirty yellow color; it is advisable to use it sparingly at first on the scalp. In the above cases, it was used as a pigment dissolved in liq. gutta percha ten per cent. It should never be applied unless under observation of a physician.

Ringworm of the beard is treated much in the same way as that on the scalp. The hairs should be shaved off, and epilation practiced on alternate days. Hyposulphite soda, one drachm to the ounce of water, is a good application.

SCABIES, or the ITCH, is a disease of the skin, caused by an animal parasite known as the *acarus scabiei*. The female burrows under the skin and lays its eggs, while the male skirmishes around on the outside. The presence of the parasite causes irritation of the skin in the form of papules, vesicles, pustules, scattered over an inflamed surface. It never appears upon the face of adults, but may be conveyed to different portions of the body by the hands; its favorite location is in the hands and between the fingers. Sulphur ointment, to which may be added a little oil of cade, is a good application. The clothes should be immersed in boiling water or baked in an oven, to kill the parasite.

BROMIDROSIS is a disease characterized by an unusual odor of the sweat. The word literally means stinking sweat, though the odor may be pleasant, such as that of violets or pineapples. It may be natural to the individual and general, as in the case of negroes, or localized as a disease to the axilla or feet, in which case the odor is nauseous and intolerable. Some cases can be relieved by applications of permanganate of potash, three grains to the ounce of water; and by soaking the stockings in the lotion, drying them of course before putting them on, or by using a dusting powder containing salicylic acid.

DISCOLORATIONS, FRECKLES and so-called LIVER-SPOTS may, at times, be removed by making applications of corrosive sublimate, one grain to the ounce. The chances are decidedly in favor of their return, when the same causes come into play that originally produced them.

DANDRUFF, or SEBORRHŒA SICCA is a disease of the sebaceous glands, characterized by the formation of grayish yellow crusts on the scalp, that may be loose, or adhere to the hairs, accumulating in such numbers as to glue them together and adhere firmly to the scalp, forming repulsive-looking crusts.

As there is no more prolific source of loss of hair, the disease should be promptly attended to. A shampoo of equal parts of saponis viridis and bay-rum will surely remove the crusts if it is used with sufficient vigor. It should be followed by an application of sulphur ointment, about a drachm of sulphur to the ounce.

ALOPECIA.—By alopecia, we mean a partial or complete loss of hair, irrespective of cause. Although the varieties of the disorder have been designated by many different terms, I shall refer only to the following: congenital, senile, premature and alopecia areata.

The congenital form is rare—especially so are cases characterized by a total loss of hair. Coincidentally with this condition, there may be an imperfect development of teeth. If there is a total absence of hair bulbs, of course, the condition will continue through life; but in other cases the hair may appear after a time.

So-called senile alopecia is generally the result of hereditary peculiarities. In some persons changes indicative of this condition are manifest at an early age. Before baldness occurs the hairs usually turn gray, become dry and thin, and are either rapidly or slowly cast off.

The causes of premature alopecia are numerous. It is either due to disorders which act locally upon the skin, as seborrhœa, psoriasis, eczema, acne, and the parasitic diseases, or to constitutional diseases which cause a general debility of the system and so diminish the activity of the circulation of the scalp, as, for example, the loss of hair that follows the severe fevers or nervous disorders. Holmes' *System of Surgery* cites several cases in which loss of hair followed the shock produced by lightning. It is said, also, to follow upon long-continued attacks of migraine. Though

the text-books do not refer to acne as an exciting cause, I have several times seen localized spots of baldness about the face in young men who had suffered from the severe forms of this disease. The loss of hair in such cases is, of course, permanent, as the cicatricial depressions that continue after the cure of acne involves the hair bulbs. Dr. Lassar believes that baldness may be spread by hair-dressers who use the same comb and brush on several persons. As an experiment, he collected the hair that fell from the heads in which dandruff was plentiful, and rubbed them up with vaseline. The ointment thus made he applied to the fur of rabbits; whereupon, it is said, baldness appeared and made rapid progress. Vaseline produced no such effect. In this connection, it is interesting to note that the parasitic nature of dandruff is not accepted by the great majority of dermatologists.

In treating premature alopecia, our aim should be to remove the cause, when possible, to correct faulty constitutional conditions, and locally, to stimulate the vascular supply of the bulbs, and so improve the nutrition of the hairs. In the majority of cases our main reliance must be local treatment. If the scalp is unusually dry, oily applications are best; but if there is an excess of sebaceous secretions, lotions containing alcohol are to be preferred. Those cases dependent upon seborrhœa are best treated by removing the scales by means of olive oil, washing the scalp with soft soap and alcohol, and at a later stage, applications of lotions containing stimulating ingredients.

The numerous controversies regarding alopecia areata have given especial interest to this form of baldness. Some dermatologists declare the disease is parasitic, while the great majority deny the statement. Gruby, in 1843, was first to declare that the disease was due to a parasite, which he called *microsporon audouini*. Thin, in 1881, described another fungus under the name of *bacterium decalvans*. The synonyms for the disease are numerous. Willan called it *porrigo decalvans*, or *alopecia circumscripta*; Bateman, *tinea decalvans*; Bazin, *tinea achromatosa*. At the present time

the parasitic nature of the disease is not allowed by far the greater number of our best authorities. Of the forty-one observers whose writings were consulted by Dr. G. T. Jackson, of New York, fifteen affirmed it was parasitic, while twenty-six declared it was not. Hutchinson was the first to show that alopecia areata occurred most frequently in persons with a weakened constitution. It is now generally regarded as due to peculiar nervous disturbances which result in impaired nutrition of the skin. Its appearance among the 14,000 cases of skin disease reported by the American Dermatological Association is comparatively rare, the number being 112, or about 2 per cent.

The course of the disease is variable. Though generally occurring suddenly, it may be several weeks before a perfectly bald patch is visible. The patches are circular in shape, smooth and shiny, sharply defined, and paler than the surrounding skin. They may coalesce till complete baldness results. I have seen one such case. At times the disease is not confined to the scalp, but may show itself upon other parts. I have treated a man who had lost nearly all the hair from his head and both eyebrows. In this case the hair began to grow again in five or six months under the use of electricity and the sulphur ointment.

HERPES ZOSTER is commonly known as shingles. It may affect any part of the body, but is more frequently found upon one side of the chest or abdomen. There is a popular idea that if the eruption extends around the body and should meet in the middle, it would cause death. It is a fact that when the rash appears on each side there is almost always a space in the median line, free from the disease; but cases have occurred where the eruption did meet under these circumstances and death did not occur. It is explained in this way: The disease is caused by the inflammation of the nerves that leave the spinal cord on each side, circle around the body, to end on each side of the median line. The eruption may be so severe that the intervening skin becomes inflamed, and in this way it becomes continuous. The disease is characterized by the formation of groups

of small vesicles, on an inflamed base, causing a burning, painful sensation. The pain may be extremely severe preceding the eruption, and even after it has disappeared. Treatment should consist in relieving the pain and protecting the vesicles from rupture. This is best accomplished by the application of dusting powder containing a little opium.

Another form of herpes, known as herpes labialis, or *fever blisters*, may be relieved by applying a little camphor water.

Dermatosis Produced by Dye-Stuffs.—The statement has been made ("Dyed Hosiery and its Relations to Skin Irritation," by J. R. Ashwell, New York *Medical Record*, November 20th, 1886,) that aniline dyes will not cause irritation of the skin, even in workmen whose faces and hands are constantly covered with them; that the dyes are then in a soluble form. The conclusion follows that dyed stockings, etc., will not cause inflammation of the skin, for the colors are then in as insoluble a form as the dyer can make them. It is further said, in the year 1872 arsenic was found in magenta, with which the hosiery was dyed in 6.5 per cent., but that the highest quantity is now under 0.09 per cent. This may be true of hosiery manufactured at Nottingham and Leicester, to which Mr. Ashwell refers, but it certainly is not true of all dyed stockings. Mr. Edson, of the New York Health Department, has called attention to the danger of wearing certain kinds of colored stockings. The dye, on analysis, was found to contain poisonous quantities of arsenic and antimony. It has occurred in the experience of nearly every physician to meet with cases of skin irritation directly traceable to the dye in the patient's clothing; but every one is not equally susceptible to the influence of these irritants. Because a certain dye-stuff will cause a dermatitis in one individual, it does not follow it will cause it in every case. I take it there must exist a condition of the skin that is predisposed to take on inflammation from certain kinds of external irritants. A number of individuals may be exposed to the same influence; a few will be affected, while the others may subject themselves to such irritants with impunity.

This is known to be true in the cases of eczema, the parasitic diseases, and dermatoses produced by rhus poisoning.

The eruptions produced by dye-stuffs are very similar to those caused by poison oak; they may be of an erythematous, vesicular, or pustular form; they have special characters by which they may usually be distinguished; the coloring matter is usually still visible on the skin when the patient comes under observation. They differ from eczema in not being diffused over the surface. Produced solely by local causes, they are limited in extent; the pruritus is not usually as severe; they are limited in duration, and have no tendency to recur. The vesicles, if present, are larger, more distended with serum than in eczema.

Dermatoses Produced by Poison Plants.—Professor White, of Harvard University, in an exhaustive review of this subject, mentions more than sixty plants in the United States that may cause inflammations of the skin. The best known are rhus toxicodendron (poison ivy), the rhus venenata (poison sumac), and rhus diversaloba (or poison oak). Poison ivy is a climbing plant; the leaves are described as "ovate or rhomboidal, acute, smooth and shining on each side: the veins sometimes a little hairy beneath; the flowers are small and greenish-white; the berries are also greenish-white in color; it may be distinguished from the Virginia creeper, the plant it most resembles, by noticing that the leaves of the latter are five on each stem, while the rhus plant has three." The poison oak is common on the California Coast. "The trunk is one to five inches in diameter, branching at the top and covered with a pale, grayish bark; the leaflets are one to thirteen in number; the flowers are small and green in axillary pannicles; the fruit grows in the form of a bunch of dried, greenish-white berries, sometimes marked with light purplish veins, and becoming wrinkled when old. The poison oak is apt to be mistaken for elder or sumac; the leaves of the latter, however, have serrated edges and the tips are pointed" (Van Harlingen).

The symptoms, as a result of the poison, are marked; an

eruption suddenly appears, made up of a number of vesicles grouped together on an inflamed base; serum exudes, forming crusts; the parts swell, and usually intense itching and burning sensations are complained of. The disease can be conveyed from one part of the body to another by means of the hands. It usually first makes its appearance on the hands, as they first come in contact with the plant. Though there are those who can rub the plant on the hands and face with impunity, others cannot even come within a radius of several feet of it without being affected. Even smoke from the burning leaves may cause the disease in those who are susceptible to its effects. Treatment should consist in applying lotions, such as the black-wash, followed by dusting powders, or by a lotion of the fluid extract of *grindelia robusta*, about a drachm to four ounces of water constantly applied.

Drug Eruptions.—In the year 1717, Lorry first called attention to the eruptions due to drugs. Dr. Prince A. Morrow, of New York, has systematized the study in his treatise upon *Drug Eruptions*, a book of two hundred pages, to which I would refer my readers for an extended treatise on this interesting subject.

About the first theory advanced as to the *causation of drug eruptions* was that they were produced by impurities mixed with the drug. Of course this was soon abandoned.

Then it was proposed that the rash might be caused by the elimination of the drug, through the skin, depending upon the elective affinity of the drug for the glandular elements. On thorough investigation of iodine lesions by Dr. Thin and others, it was found that the sebaceous glands were not affected, and that the lesions occurred where there were no sebaceous glands, as in cicatricial tissue and the palms of the hands. As to saturation of the system, of course this idea had to be abandoned when it was found that a few grains, as well as a hundred, could produce an eruption; indeed, it has been stated that large doses, in some cases, have no such ill effect.

At the present time, the views held by Prof. Morrow are those that are most generally accepted. He says: "The only correct interpretation of the physiological predisposition (known as idiosyncrasy) as a determining cause of drug eruptions, is based upon a recognition of their neurotic character."

Again he says: "The large majority of cutaneous disturbances are consecutive to absorption of the drug, and due to its specific action upon the peripheral nerves and nerve centres."

The *diagnosis* of medicinal rashes must depend almost entirely upon their sudden appearance and their equally sudden disappearance on discontinuing the medicine. We cannot depend upon the form or situation of the lesion, as in skin diseases in general, for the reason that the lesion depends more upon idiosyncrasy than the particular drug. Even in the case of iodic eruptions, we do not always find papules or pustules. Several years ago I reported a case of *Iodide of Ammonium Eruption*, in which the principal lesions were bullæ. The case is unique in that, to my knowledge, it is the only one ever reported of a bullous eruption due to iodide of ammonium. I quote it briefly:

Mr. R., 51 years of age, suffering with broncho-pneumonia. After taking seven doses of a mixture containing iodide of ammonium, gr. iij to the dose, an eruption of vesicles appeared on the face and scalp. Medicine discontinued, and in a few days the rash disappeared. After two weeks mixture again given in half the former doses. After four doses (about gr. vj of the drug having been taken), the eruption again appeared, and attained its maximum development in ten days after it was discontinued. When I first saw the case, I found an eruption of vesicles and bullæ on the face, scalp, trunk, thighs and legs. The lesions varied in size from that of a split pea to a pigeon egg. Those that had not broken down were markedly umbilicated; those that had broken down were discharging bloody serum. Four days later, many bullæ had become confluent, discharging a thicker, sanguineous pus. No new lesions appeared after this. Within a week, they were on a level with the surrounding skin, some having disappeared. Patient died within a few days.

An interesting case of *chloral eruption* was that of Mrs. C., whom I have attended for alopecia. She has taken chloral in ten-grain doses every month to relieve the intense headaches with which she has suffered at the menstrual periods. The next day her face is slightly red and swollen, but if she takes alcohol in any form, even a glass of sherry, within three days a diffuse hyperæmia appears on the face and neck, accompanied by heat and itching. This has happened many times, and is not an exceptional occurrence with her.

ART. III.—Membranous Croup.*

By JOHN DUNN, M. D., of Richmond, Va.,

PROFESSOR OF DISEASES OF THE EAR, THROAT AND NOSE, AND ASSOCIATE PROFESSOR OF DISEASES OF THE EYE, COLLEGE PHYSICIANS AND SURGEONS, RICHMOND, VA.

At our last meeting, gentlemen, you were shown two patients upon whom tracheotomy had been performed—one by Dr. Joseph A. White, operated on in 1887 for intra-laryngeal papillomata. This extremely interesting case, teaching, among other things, that papillomata of the mucous membranes, like those of the outer skin, will, if let alone, in the course of time undergo a spontaneous cure, shows also that in the larynx these growths may attain a size sufficient to occlude the gateway of life and demand surgical interference.

On the second patient, tracheotomy had been done the week before for an intra-laryngeal growth, most probably also papillomatous in nature, but as the patient (three and a half years old) had up to that time proved so unruly as to prevent a laryngoscopic examination, no accurate diagnosis could be made. The history of the case, however, points to papilloma; and, as the tracheotomy has succeeded in relieving the distressing dyspnœa, we may take our time in

A lecture delivered to the Class in Laryngology at the College of Physicians and Surgeons, Richmond, Va., February 7, 1894.

persuading the little fellow to allow us to examine his larynx. Most of you were present at this operation.

Since our last lecture some of you have witnessed a similar operation, done this time, however, for another disease—membranous croup—which disease will be the subject of our lecture this afternoon.

I know no better way to introduce you to *croupous laryngitis*—the proper name for the disease—than by endeavoring to draw the picture that presented itself on my first visit to the little patient upon whom the operation of tracheotomy was performed.

Although it was February, I could find that there was but one fire in the house in which the patient lived, and that one in the room used for a kitchen. The hall was not heated; there was no fire in the dining-room; none in the parlor. I mention these details for reasons which will be apparent later on. The little patient, a boy three years old, was in his crib near the kitchen stove, upon which, fortunately, the kettle was boiling. He was propped up with pillows at his back until he was almost in a sitting posture. With each breath, especially the inspiratory part of it, you could hear the hoarse, rough noise so characteristic of laryngeal obstruction. If you noticed the little fellow in any way closely, you would see that breathing at all was an effort; you would see the supra- and infra-clavicular regions sink deeply in. When the heavy crib clothing and garments in which the child was wrapped were lifted so as to expose the abdomen, you would see it sink in deeply and its walls drawn up far beneath the ribs with each inspiratory effort. The laryngeal stenosis had not proceeded to the degree that causes the sternum to sink in with each endeavor to get breath—a symptom I was able to show you in its most marked degree before the operation in the little patient whose trachea was opened for laryngeal papillomata. The mother of the child, however, volunteered the information that during its struggles for breath the night before, “the breastbone would almost meet the backbone” (an accurate description of what took place). The child’s pulse was rapid and weak. Any exertion on the child’s part would increase the dyspnoea, and with it the laryngeal sounds. I took the child to the window to look into its pharynx. I found the tonsils hypertrophied and their follicles the seat of a membranous exudate. This exudate, however, was confined to

the follicles and was not a general one ; nor was there to be seen any evidence of a deposit on the soft palate or on the post-pharyngeal wall. The child's nose was "running"—*i. e.*, from its nostrils flowed a thick, yellowish secretion ; while around the entrance to the nostrils the skin was excoriated, presenting, in short, the picture I have so often drawn for you this session in our talks about repeated inflammations of the superficial lymphatics of the upper and lower pharynx. The child's physician, Dr. Staton, told me that the trouble had begun about three days before. The child had had considerable fever. A calomel purge had been given, but in spite of it and the usual remedies the laryngeal symptoms had grown worse, until, as the doctor said, he "recognized the fact that internal medicines were useless, and that the child would die unless something were done to give him breath."

Such, gentlemen, is a picture which will more than once, in your professional careers, present itself for your contemplation ; and, as a rule, when you are called in in consultation, you will have to contemplate rather hurriedly or another picture will present itself.

Is croupous laryngitis laryngeal diphtheria? I agree with Bosworth in thinking they are two distinct diseases, and my reasons for my belief, as well as the indications for tracheotomy in membranous laryngitis, whether croupous or diphtheritic, I ask you to allow me to postpone until the lectures on diphtheria. I shall say here only this, that although the attendant circumstances made everything favorable for the development of diphtheria in the other young children of this family and the numerous attendant friends, no case of diphtheria has as yet appeared.

This disease is ushered in with a chill, or chilly sensations. Later, a fever appears. At night a hoarse, metallic cough, a croup cough, makes its appearance. This may last a little while, and the child may fall asleep. With the croup cough there is more or less difficulty of breathing. As time passes on the voice gets hoarser, the difficulty of breathing becomes more apparent, the child more and more uneasy. If the membrane increase, the difficulty of breathing becomes extreme. The child may cough up the mem-

brane and obtain relief; the membranous exudate may spread into the trachea or into the bronchi. The picture varies much with the severity of the case; the condition of the patient attacked; the treatment the patient receives, and the conditions surrounding the patient.

Croupous laryngitis is a disease confined practically to the first seven or eight years of life. It occurs most frequently, I believe, in the second or third year.

We have to do with a disease which forms a membrane on the mucous surface of the larynx. At first the mucous membrane becomes congested; there is vascular dilatation; inflammatory stasis; the escape of serum containing much fibrin, which, as it reaches the surface, coagulates, retaining, however, its connection with the adenoid layer of mucous membrane. There is an increase in the proliferation of the epithelium of the mucous membrane. The epithelial cells thus cast off become entangled in sero-fibrinous exudate, and the whole constitutes the croupous membrane. The question as to the relation of a specific germ to the production of this membrane, I wish to defer until our lectures on diphtheria are delivered.

A few words in regard to the *prognosis* in the average case of croupous laryngitis. If we turn to Mackenzie's tables for information, we find that he considers croupous laryngitis and laryngeal diphtheria as the same disease, and hence it follows that his tables will not help us, and do not know that I can do better than to quote Bosworth here: "In the majority of instances of true croup we are driven sooner or later to our last resource—namely, to open the air passages, a measure which is successful, but in a very small proportion of the cases where the trachea and bronchi have been invaded, whether the case be croupous or diphtheritic."

In regard to *treatment*: The great difficulty of curing this disease lies not in the nature of the disease itself, but in the region it has chosen to manifest itself. Croupous rhinitis occurs, and it is a disease which pathologically is the same as croupous laryngitis. By the same processes is the croupous membrane formed. In the nose, however, no matter what

the age of your patient, the false membrane is easily dislodged by the use of a soda-bicarbonate solution used as a spray, and this may be done as often as it reforms. In croupous laryngitis this procedure for removal of the membrane is inapplicable. Your patient is too young to appreciate the object of your treatment, and with all the strength at his command will resist your endeavors to remove the laryngeal obstruction. His throat is painful; any manipulation of it increases the pain, and your persuasive powers are to no avail. Were the windpipes of young children regions easy of access, croupous laryngitis would be shorn of most of its terrors; but they are not, and the disease is one you will not care to encounter. Direct applications to the larynx, then, are out of the question in almost every case.

Should you be called in to a case of this disease before the membrane has formed to such an extent as to threaten immediate closure of the larynx, your patient should be given three or four grains of calomel with a quarter of a grain of ipecac and five grains of bicarbonate of soda, to be followed after four hours by a dose of castor oil. It is well, then, to order one grain of calomel and five minims of tincture of the chloride of iron, to be given alternate hours, watching the effect of the calomel. Further internal treatment is unnecessary.

In regard to the use of pilocarpine in this disease, it may be given in doses of $\frac{1}{24}$ th grain, to be repeated in four hours, provided your patient is robust and you see him early enough. If the patient be of a weak constitution, however, or you see him first in the later stages of the disease, I am inclined to think this remedy should not be used, for it certainly has marked depressant effects. The usual expectorants and emetics should be avoided after the membrane has formed, and I see little use for them at any stage of the disease.

I mentioned above that the house in which our patient lived was improperly heated. To my mind there is no more important point in connection with the treatment of

membranous croup, both before and after operation (should an operation become necessary) than the temperature and atmospheric condition of the room in which the patient is kept. It matters not what part a specific germ may or may not play in the continuance of this disease when once developed, the disease takes its origin in a congested condition of the adenoid layer of the laryngeal mucous membrane, which congested condition owes its existence to circulatory disturbances brought about by the unequal application of moist, low temperature to different parts of the body. We explained fully what we mean by this in our lectures on the catarrhal conditions of the mucous membranes, and we, therefore, shall not now go into it more fully. As far as possible, the patient's room should be kept warm all of the twenty-four hours. Nor can you be too careful in impressing this upon the parents of the child. The poor are apt to have the room they all frequent too hot during their waking hours, while their bed-rooms are without fire the greater part of the night. A few hours in a room without fire may be fatal to your little patient, who wants all the life there is in him to combat the disease, and has no strength to spare fighting a cold temperature. This is a point of the first importance.

Some writers object to much moisture in the atmosphere of the room. For my part, I am much in its favor. Warm, moist air is favorable, I believe, to the casting off of the false membrane, and I should advise that the old fashion of having a kettle boiling in the room be kept up. Further than this, the custom of impregnating the air of the room (and among the poor an empty tomato can answers for this purpose well) with tar I would advise. The ordinary commercial tar will answer for the purpose. Put a tablespoonful of tar in half a pint of water, and let the steam from this pass into the room.

Should, in spite of all your endeavors, the membrane continue to increase in the larynx, as evidenced by the increasing dyspnœa, until tracheotomy becomes advisable, the operation should not be deferred until the patient is

already in the arms of death. The early operation has many things to commend it. The struggles for breath are exhausting and do much in many cases to prevent a favorable result.

In closing, I hope you will pardon me if, for a moment, I return to the subject of a previous lecture, tracheotomy, and give you one or two points neglected in that lecture, but which the operation in this case served to bring before my mind.

The low operation—that is, the one below the isthmus—was selected, and, I think, should be the one always chosen, while there is still life enough in the patient to leave open to us a choice in the matter of which operation we shall do. And it is the one to be chosen for this reason: It is well to have the lower opening of the tracheal canula below the line of the membranous deposit. And is it impossible to decide whether the membrane has confined itself to the larynx, or has formed over part or the whole of the trachea? In this last operation, the membrane must have extended very low in the trachea, for although the low operation was done, no sooner was the canula in position than the patient blew out of it, and into my face, a large piece of thick membrane; and I was told by Dr. Staton and the child's mother that the child continued at intervals to blow pieces of membrane from the tube throughout the whole night. I would advise you to be a little careful and not put your face over the opening after the canula is in position. You may be mistaken in your diagnosis, and the disease may be diphtheria.

When the trachea has been opened and the canula has been gotten into position, be careful not to allow the canula to be forced out of its position in the wound. Should, by any chance, this happen, the tracheal opening should be sought with a pair of thin-bladed forceps, and it is well always to have them at hand, or, better, with a pair of small tracheal forceps. Do not attempt, as a primary procedure, to force the canula again into the trachea, for the probabili-

ties are you will fail, owing either to the struggles of the patient or to the displacement of some plane of tissue between the skin and trachea. I have in mind two cases where this occurred and resulted in the death of the patients.

Again, be careful in your instructions to the mother or nurse to tell her not to allow the inner canula to remain out when it has been removed, as, for instance, to clean it or on account of a blocking up of its lumen with mucus, etc. You can readily see why this should be, for should the outer tube become blocked, there would be nothing to be done but to remove this also—a thing the nurse would not, in all likelihood, think to do, and—you can readily see what would happen.

There is one other point of minor importance, yet one if you remember will save you some little trouble. See that the tapes are tied to the canula before its insertion, and do not tie the knots close to the slits in the canula. It is difficult to keep the exterior of the wound clean when the knots are close to the wound, for the mucus blown from the tube and the slight discharge from the cut on the skin are apt to dry about the knots and are difficult to remove. The canula should be at least an inch and a half from the knots in the tape, and to accomplish this, use the sling knot.

I have purposely made no reference to intubation, a procedure which in the larger cities has some warm advocates. Few of you will have enough cases of laryngeal stenosis to allow you to become expert in inserting the intubation tubes, and until you have had some practice in this method and have seen enough of laryngeal obstruction to appreciate the need of a better procedure than tracheotomy. I would commend to you the surgical endeavor. Under some circumstances there are undoubted advantages in the use of O'Dwyer's tubes, but for the present further mention of them is omitted.

ART. IV.—The Importance of Early Diagnosis of Cancer of the Uterus.*

By I. S. STONE, M. D., Washington, D. C.

Since vaginal hysterectomy has become a successful and popular operation, most physicians favor entire extirpation rather than amputation or partial removal of the uterus. We do not find these cases, as a rule, early enough to promise a cure by any operation, and we do not think much progress has been made in the early detection of cancer.

The writer has little confidence in statistics of hysterectomy for cancer of the uterus, in which the disease has extended beyond the cervix. A recital of a long list of hysterectomies for cancer may be of no value whatever, unless the actual presence of cancer is demonstrated by the microscope.

Again, it may be justly claimed that operations done at a late period, or when all the disease cannot be thoroughly and radically removed, should not be classified with those performed at an earlier and safer period. The uterus should not be removed save when the disease is confined to the cervix. If the disease has extended to the body of the uterus, it may be taken for granted that it has extended elsewhere, and cannot be entirely removed, in which case, thorough curetting and actual or chemical cauterization afford not only relief from pain, hæmorrhage, etc., but probably prolong life as much as the more dangerous extirpation. The only extirpations for cancer done by the writer have been in patients referred by physicians outside of the city. But my experience cannot be exceptional, for on all sides is heard the same sad story that cases are not discovered early enough to promise relief or cure by operation.

As it is a common experience to see patients in apparently good condition who are unexpectedly found to be the hope-

* Read at a meeting of the Medical and Surgical Society of the District of Columbia, December 11th, 1893.

less victims of cancer, some effort should be made to arouse the general practitioner to an appreciation of the importance of watching patients more closely. We occasionally find physicians looking for a cachexia before deciding that the case is of malignant nature. It is useless to look for progress while such ideas continue to be entertained by medical men. It may, therefore, be taken for granted that the present state of affairs must continue unless some radical or definite steps are taken to search for and detect these cases in their incipency. There appears no other course open to the profession but to practice and teach actual examination at intervals of certain cases.

1st. Those who fear, or have reason by heredity to fear, cancer, especially about the time of the menopause.

2d. Those who have sustained a laceration of the cervix, and are between the fortieth and fiftieth year.

3d. Those who have any of the usual so-called early signs of cancer, such as bleeding after coitus, or especially those having menorrhagia or metrorrhagia, or a return of the flow after the menopause.

These examinations may be made at intervals of six, twelve or eighteen months, as may be thought best by the physician.

It will doubtless be urged by some that these suggestions are extreme and cannot become practically useful. In answer to these objections the writer would call attention to the time, easily remembered by the older practitioners, when "modesty" (?) (pardon the mark) forbade the physician from making actual ocular examination of the perineum after delivery. We have often heard physicians say they never had a patient sustain a tear of the perineum. We have also heard the attending physician criticised many times in recent years for not having done his duty in discovering a tear when the accident occurred, and for not having repaired it at once. Just so will it be when the profession does its duty toward women in teaching them to prevent serious cancerous disease. In prevention or early detection we can

alone find any hope in these malignant diseases, at least in our present state of knowledge of the subject. When the physician is held responsible for the life and health of his clients, it should be his duty to take measures in advance which may prove clearly to their advantage.

ART. V.—The Care and Treatment of the Insane in Private Practice.*

By J. T. WILSON, M. D., of Sherman, Texas.

In many communities it is necessary at times for the general practitioner to have charge of cases of insanity for obvious reasons, and he should have some knowledge of its scientific care and treatment in order to give his patient the best possible chance for his restoration. I do not mean to say that he should prepare himself as an expert, which cannot be done without devoting his entire time to it; but he should have some general knowledge of the various definitions given, of what is known of its etiology, pathology, its classifications and symptomatology.

No satisfactory definition of insanity has yet been given, and most authors have a definition of their own, none of which stand the test of legal analysis in important medico-legal cases before the courts, and in all is discovered some objection by medical as well as legal specialists.

For clinical purposes it is necessary to have some general classification.

This, too, is a subject upon which authors do not agree, and many classifications and modifications have been given us, all based upon the peculiar manifestations of the disease, the divisions and sub-divisions of which are complicated and sometimes confusing.

There seems to be no scientific classification based upon known pathology, but is classified symptomatically, and does not indicate the pathological condition underlying

* Read before North Texas Medical Association in Paris, Texas, January, 1894.

each specific division, except in so far as the pathology in some cases may be known from certain symptoms. A classification based upon pathological conditions that would be of scientific value cannot be made in the present state of our knowledge. Then, until the scalpel and microscope have thrown more light upon the true pathology, we will have to do the best we can with the old symptomatic classifications.

It is true that a century of investigation and experience in treating insanity under these classifications has developed much useful knowledge in its management and treatment; and while a great advance has been made in this field, especially in the last quarter of a century, we are still treating insanity symptomatically, or at least most of its forms.

For all practical purposes the following for the general practitioner will be sufficient, viz: Acute and chronic mania, acute and chronic melancholy, acute and chronic dementia, paralytic dementia or paralyzes generale. These can be made to include nearly all the forms with which we have to deal.

Acute insanity is, as a rule, a curable disease, depending, however, on the cause and duration.

A person who has had one attack is rendered thereby much more liable to one or more subsequent attacks; and after the first attack they nearly always have some premonition of the next, and predict it themselves. Some make special efforts to conceal it, others may request to be watched or taken away, or will voluntarily place themselves in a hospital—the latter, however, are few.

I believe a majority of insane persons are to a certain extent conscious of their condition. They know they have a mental trouble, and are afraid of being sent to an asylum, of which so many have a horror.

General paralysis of the insane or paralytic dementia, is, as a rule, an incurable disease.

The prognosis in all forms of insanity depends very much

upon the character and cause. Secondary dementia is seldom ever cured; chronic mania, too, is rarely susceptible of radical cure. They are all much less curable when the period of the attack has been prolonged beyond three or four months. In subsequent attacks patients recover less frequently than from the first, and it becomes more and more incurable after each recurring attack, though I have known patients to have many attacks and make a fairly good recovery from each one; indeed, restoration from prolonged attacks, in some cases for many years, are remarkable. In a very large percentage of cases, however, no matter from what cause, where some time has elapsed since the attack began, the brain is so much damaged that I do not believe it ever regains its pristine vigor and perfect function—its original intellectual power, though the patient may seem well and remain so.

The pulse helps us a little in prognosis. When excitement runs high it gets rapid; but when it passes off and the pulse falls to nearly or quite normal, the attack is likely to soon pass away and the patient probably make an early recovery; but if it keeps above the normal in both storm and calm, the attack is liable to be prolonged. In very violent attacks the tongue will often remain clear and moist; on the other hand, if it becomes dry, the coating accumulates and is brown—that peculiar fur which is so indicative of acute nervous disorder; then we can hardly hope for it to pass away in a few days.

Mere eccentricities and peculiarities that have always existed and somewhat increases with age, are not necessarily insanity, but they are often observed in other cases in the border-land. These eccentricities and peculiar characteristics should not shield a man from responsibility until he is proven absolutely insane.

The wide range that the definition of insanity has taken in the present day, and the exemption from responsibility allowed, is a dangerous condition of our social and legal fabric.

Every person who exhibits some peculiar traits of character, or allows himself to give way to the sudden fits of an ugly temper without a reasonable self-control that is within his power, is called insane; and whether from moral turpitude, moral obliquity or moral degradation—call it what you will—are by psychological enthusiasts or sentimental fanatics defended as irresponsible beings and escape well-merited punishment for horrible crimes. Too many guilty criminals are allowed to escape a just sentence for some murderous act under this license. They are nearly always aware of their own peculiarities, cognizant of the public knowledge of them, of the public weakness upon this subject, and commit dastardly crimes under this plea, feeling sure of being acquitted when arraigned before the bar of justice.

The lawyers and juries are never competent judges to decide upon these border-land cases so-called, or indeed, upon many cases within the border-land; and these ordinary legal processes made necessary to have a patient restrained of his liberty or committed to an asylum, too often prove a farce, sometimes resulting in injury, sometimes murder, sometimes suicide of the patient, whose sensitive nature abhors this public trial and often spectacle of curiosity, where unfounded prejudice and false sentiment sometimes abound.

The physician here, by the very nature of his calling, assumes an important responsibility. While I would rather see ten criminals go free than one innocent person be made to suffer an unjust punishment, the medico-legal doctor should not permit a misguided sentimental influence or a fear of unfavorable public criticism to warp his judgment or turn him from the clear course of his duty. He should boldly and freely give the jury the result of his honest convictions, offend whom they may—convict the criminal and set free the innocent.

It is in most true border-land cases where the greatest amount of good can be done in private practice when the

physician can gain the confidence of the patient. There is here a defect in nutrition, and the finer lesions that even the microscope may not define, before the grosser changes come on which produce a mental unsoundness that is brought to light by different manifestations or outward signs.

If these patients could be taken charge of and treated during these early nutritive changes, before the structural or organic lesions are developed, much greater good might be accomplished.

They are frequently manifested in men of good physique, possessing no eccentricities; are noticed to act in a manner different from their ordinary natural methods, or in conversation may appear to have delusions, yet in other respects seem in their normal health. There may be insomnia, irritable temper, strong prejudice, hatred and groundless suspicions. Often the beginning of these cases is in some very trivial circumstance, and they appear so different from their normal manner it is readily noticed. It is the great contrast from their usual conduct that is strikingly noticed which often gives rise to the first suspicions of a mental derangement; and it is this commencing stage of insanity that ought to receive early treatment. In a very large per cent. of all cases, a well-managed hospital is decidedly the best place for their scientific care and treatment, but this is not always practicable. In some few cases it is an undoubted disadvantage to confine them to an asylum; they grow rapidly worse and die or lapse into a chronic incurable condition.

Friends often object to sending patients to an asylum because of the false idea that a stigma is attached to one who has been an inmate of such an institution. The laity should be educated out of this erroneous notion and taught that there is no more disgrace to be sent to a hospital for mental and nervous diseases than to a hospital for any other disease; and all should be thankful that there are such places provided for the care of these unfortunates. But there

always will be cases of whom the general practitioner will have and ought to take charge of and treat in every community, and he should prepare himself to attend them as he would other unusual cases that are liable to burden his professional life at any time.

The physician who treats insanity in private practice does not sleep in beds of fragrant roses when he has such a case upon his hands, nor walk in fields elysian. He may have reed-birds and hock for supper and the midnight hour may find him dreaming upon his pillow—it may be of eider-down—but they will probably not be halcyon dreams that sweeten a refreshing repose, and he will awake to find his responsibility growing heavier day by day if his patient's disease progresses, as it will most likely do for a time. In many cases he is opposed at every step by the suspicions and delusions of his patient, and frequently by members of the family, who have their own preconceived ideas or ideas developed as the case progresses, of how and what the management should be. In truth, he has enough to try his patience sorely, be he ever so strong in self-control. He is expected sometimes to do miraculous things—to bear with quiet resignation the delusions of the patient and the hallucinations of his friends; he is expected to restore dethroned reason to its normal temple with its previous majestic equilibrium by some patent elixir or mysterious act agreeable to patient and all connected with him.

This disease will in truth require of the physician a supreme effort in patience and self-control; he must never forget that he is dealing with one whose mind is diseased and who is incapable of logical reasoning, and for suffering humanity's sake, as well as for scientific results, demands his sincere sympathies, his patient kindness and his best skill; he must deal gently but firmly with him and his friends, never permitting his mature judgment to be swayed by untenable arguments nor mistaken appeals to sentiment. With the strong weapons of will and judgment firmly in his grasp, he can often wield them for great good to his un-

fortunate patient. It will be necessary to conduct consultations, when deemed advisable, with great tactical skill, as the patient is liable to think that a plot is being concocted against him. Among the most suitable cases for home treatment are what is called mania transitoria, and are cases that usually run a rapid course; but we cannot select our cases and have to take them as they come. There are, however, some cases that cannot be treated in private.

Patients should not be removed from their homes too early in the attack, especially when very feeble, unless there is some urgent reason.

In the beginning of the treatment it is important to elicit a correct history of each case. The predisposing and exciting causes should be carefully searched for and if possible removed. Then every organ of the body should be investigated with as much care and thoroughness as circumstances will permit. If any are found diseased, they should, if possible, be restored to their normal condition, while at the same time the disordered mental manifestation is receiving due attention. If due to venereal disease, the treatment is plain, and if the case be recent, the progress is usually satisfactory. This potent poison as a cause should frequently be inquired into.

A true and full history in many cases is very difficult to obtain; the patient himself is not a reliable witness, and among relatives, family pride often stands in the way. To learn the true facts in regard to heredity has an important bearing upon prognosis and treatment. It is always expensive to treat a patient in this condition in private practice. In most instances it is absolutely necessary to have a constant attendant; indeed, in violent cases, two—one for the day and one for the night—and these should, if possible, be congenial to him. The irritation of an objectionable nurse, and one who cannot make concessions and adapt himself to the patient's changing caprices, will often make him worse. Unless there is some urgent reason to the contrary, the patient should not be strictly confined to

his room or house, but whenever practicable, taken out for open-air exercise, and all places that are liable to excite him should be avoided. For the same reason it is sometimes absolutely necessary to remove him from his home and secure quarters in another neighborhood. Sometimes "boarding them out" is an advantage. Neither ought his attendants to be members of his own family; they are frequently the objects of his earliest antipathy, and often, too, the family physician shares in this feeling, and another has to be put in charge. Strangers can always assume a more controlling influence over him than kindred and intimate acquaintances. He should be removed from every source of excitement as quickly as practicable; should be dealt with gently and kindly, but with unwavering firmness. He is as much susceptible to kind and gentle treatment as the most reasonable, in many cases, and often remembers it when recovery takes place. Too much attention will occasionally aggravate him, and a little wholesome neglect is sometimes an advantage. A good nurse or attendant is essential to success; an indifferent one will make confusion worse confounded. A person of intelligence should be selected, with characteristics that fit him for the duty, and should be a companion as well as nurse—one who would take an interest in the welfare of his important charge. He should have ready wit and presence of mind; have a kindly disposition, yet know how to be gently firm, cool and quiet under excitement; possessing tact to make his influence of value; patient under trying circumstances, with good judgment and self-control, and well paid for his arduous services. Such an attendant is difficult to procure, but it pays well to get such an one if possible. In most cases, as I have said, more than one attendant is needed. Few persons realize the difficulties, the fatigue, and the tax upon one's patience to be compelled to watch an insane person night and day with only an hour or two of fitful sleep snatched from some quiet moments of the too-often vigilant patient. One will after a time get tired out and become desperate, and it is

frequently under such circumstances that mistreatment occurs.

The world owes to the great Pinel an unpaid debt of gratitude for bringing about a welcome revolution in the treatment of these unfortunate people. It was he who first struck the shackles from their painful, confined limbs and set them free. Previous to his day, to become insane was an almost certain doom. The name of Pinel and his famous Bicetre hospital, where his reformation began, will go down to the end of time as one of the brightest pages in the medical history of insanity. Connelly, of England, fanned the flame that Pinel lighted, and Ray and Kirkbride, of our own America, heaped on the fuel that illumined its glory, until now the other extreme is assuming dangerous proportions.

The question of restraint is agitating the minds of all alienists and philanthropists. Some asylum superintendents claim to have dispensed with all manner of mechanical restraint in all cases; others have limited the number to very few, and in very truth mechanical restraint in asylums has been brought down to a very narrow limit compared even with twenty-five years ago.

There are some cases and conditions whose personal welfare in my judgment at times require some form of mechanical restraint.

It is necessary to protect the persons and property of others as well as the patient himself. The possibility of suicide and homicide in every case must not be lost sight of. These dreadful acts are sometimes committed when they are least thought of, and no false notion of sentiment should prevent us from performing a duty that a rational and experienced judgment dictates. Therefore, if the safety of the patient, of others, and of property depend upon some form of mechanical restraint in private practice, we should not hesitate to have recourse to it, but in a way that it will in the least irritate or excite the patient. I have seen some of the most violent insane quiet down and become perfectly

docile under restraint, and in others, the same happy change when confined alone in a dark room, with nothing left by which they might injure themselves. It, however, should always be used under the personal supervision or direction of the physician in charge, for fear of abuse—and there is no doubt that it has been sadly abused. But if restraint is never necessary, why have asylums at all?

Acute insanity, it must be remembered, is a wasting disorder and taxes heavily the vital powers. Nutrition, then, is a very important part of the treatment. Diet should be selected with the greatest care and a view to its easily digestible and assimilable qualities, such as will suit each individual case; it should be generous, but care should be taken not to over-tax the digestive powers. Digestion suffers more or less in all these cases, and appetite frequently fails; on the other hand, we sometimes meet with a morbid appetite. It must be remembered that certain nerves preside over the function of digestion, and the brain exerts a controlling influence over these nerves; the brain being the organ affected, the stomach suffers to a certain degree. In many cases the patient is laboring under the delusion that his food is poisoned, and for that reason obstinately refuses to eat; and these delusive suspicions are often very difficult to overcome. It requires much tact to induce him to eat. Sometimes obtaining his meals from a different place and carried by a different person may satisfy him for a time. Occasionally this fasting is intended as a method of suicide; but whatever the reason, it may become necessary to feed him by force. It requires the exercise of good judgment to know when this forced artificial feeding should begin; it is sometimes delayed too long. This forced feeding may be accomplished with a spoon or a feeding cup with a projecting spout or nozzle, if attempted by an expert nurse. The stomach tube has often to be resorted to, and is sometimes the only method. The pumping of the food into the stomach can be done without much trouble when the resistance that will always be met with is overcome. The mouth

should be held open by something which will not injure the mucous membrane. There are excellent mouth gags made for the purpose that prove very effectual, but where it is seldom needed, or too expensive, a piece of soft wood made smooth will answer the purpose. The tube should be well oiled, and butter is the most agreeable substance for that purpose. It should be passed down very gently and with as little force as possible, to prevent injury. If the mouth is not held forcibly open, the tube will sometimes be bitten in two. The food, of course, is fluid, and milk with raw eggs, alternated with broth, beef tea and cocoa, is best. The quantity should be from one to two pints, according to the condition, capacity of the stomach, and powers of digestion. In those cases which so strenuously resist the introduction of the ordinary stomach tube and renders the attempt liable to be productive of injury, the nasal tube can be used with excellent results, and the patient cannot help himself; but the introduction requires more care, for fear the naso-pharyngeal mucous membrane be injured, or, what would be worse, the tube might be passed into the larynx, trachea and bronchial tube. A little experience, tact and care will obviate this accident, and it is a very convenient and most efficient method of feeding a refractory patient.

I have dwelt somewhat at length on this subject of feeding, because it is of paramount importance, and a very large majority of cases of insanity have failing appetites, or from some of the causes above mentioned, refuse to eat, and on account of the depression from the nervous shock produced by the explosion of the attack usually following high nervous tension, will soon become exhausted.

We will have in a majority of cases to contend with constipation, sometimes very obstinate. It is of great importance that this condition should be promptly relieved and receive careful attention all through the attack. The bowels should be one of the first things examined into; nor can we always depend upon the patient's statements. A good purgative followed by a large hot enema can do no harm

and is often of great benefit. Cathartics in this class of cases should not be drastic, but mild, yet effective. There is danger in too much drastic purging, but the entire alimentary tract should be acted upon occasionally, and simple enemas two or three times a week are of much service. In some cases there is fæcal impaction, and the thorough relieving of this condition often proves of immense benefit.

It is also very necessary to look after the urinary excretion, which will sometimes be found to be disordered. There are times when the patient's condition is such that he cannot empty his bladder; in these cases, over-distention from retention is liable to do much harm. It is necessary to watch for this trouble and relieve it promptly; often the catheter will have to be used.

Insomnia, occasionally very persistent, is often a prominent symptom—sometimes the first—and frequently gives trouble. Sleep—good, long, refreshing sleep—“tired nature's sweet restorer,” should be obtained in some way. We have now many valuable remedies for inducing sleep that we did not have twenty-five or thirty years ago; but if we can bring it about without the use of drugs, which is seldom, however, it would be best. Sometimes a good hot bath will produce a natural sleep; a good supper an hour or so before bed-time; a long, somewhat fatiguing walk, or, on retiring, a generous glass of milk, with the addition of half to a tablespoonful of whiskey or brandy, will have a happy effect now and then. I ought to state in this connection that alcoholic stimulants are sometimes very necessary and should be administered, but with great caution, for fear the habit may be established.

In former times opium was the drug mainly relied upon to produce sleep and quiet, but quite frequently had the opposite effect, and sometimes only aggravated the condition; it is, I think, a dangerous remedy, and except for the relief of actual pain, and in some special conditions, should not be used; it locks up secretions, disorders digestion, and may increase the mental irritability.

The bromides will sometimes have a happy effect; often, however, they will not answer alone. Chloral hydrate is the most reliable hypnotic at our command, but is probably the most depressing, which is one great fault with nearly all this class of remedies of any value. From fifteen to twenty grains will usually be enough, and I think it is best combined with one of the bromides in from twenty to thirty grain doses. Sometimes it may be necessary to give at the same time an alcoholic stimulant, or one of the heart tonics, as *strophanthus*, *digitalis*, *nitro-glycerine*, etc. Paraldehyde is an excellent hypnotic, and does not have the depressing effect of most of the others. It has its disadvantages, however, for, like chloral, it has a very unpleasant taste and also a disagreeable odor. Many object to it on this account. And then, too, if used for several days, the patient becomes accustomed to its action, and it requires rapidly increasing doses. I usually begin with about forty minims, and it can be cautiously increased to two drachms.

Sulphonal, though not as reliable as the former, is a good hypnotic in doses of from ten to twenty grains; indeed, as high as thirty grains is sometimes given, but the maximum doses of these remedies should not be administered at the commencement. Sulphonal has the advantage of not being disagreeable to take, and can be given with the food; it is now largely used.

Where much continuous excitement and restlessness exists, *hyoscine hydrobromate* or *hydrochlorate* are our best reliance, beginning with 1-150th grain and gradually increased as may be necessary; and this drug, too, requires increasing doses after having been given a few times, but is a remedy of great value.

Amylene hydrate, *chloralamid*, and *urethan* are being used extensively, but I have had no personal experience with them.

All hypnotics irritate the stomach, and should be given only when the absolute necessity exists. Hypodermic medication is best when it can be used.

The indications in all cases should be watched for and carefully met when they arise. If the patient is suffering from cerebral hyperæmia, the bromides are the best drugs for its relief at our command; ergot is sometimes an excellent adjunct combined with them, or better given hypodermically; but bromides must be given with caution, or bromism might be induced; besides, the depressing effects should be watched. The hot baths in this condition, with ice cap to the head, have a good effect.

A general tonic regimen is indicated at some time in all cases of insanity. Iron in some form, quinia, strychnia, phosphoric and muriatic acid in suitable doses, some of the bark preparations, often dogwood, cod liver oil, when they can be induced to take it, sometimes are very valuable remedies.

It is a curious fact that while many of these patients object to taking medicines that have a disagreeable taste, there are, on the other hand, a great many who will protest against taking pleasant doses, regarding them with suspicion; and some will take the vilest dose without a complaint.

Baths given with special good judgment, such as ordinary, hot, cold, sponge, vapor, Turkish, and Russian, are also valuable agents. Massage systematically used will do a great deal of good. I have known an excited patient calm down and go quietly to sleep after it.

General hygienic measures are especially necessary. A moderate amount of exercise should be had, especially when it can be utilized for the double purpose of an aid to digestion and general health and to divert the patient's mind. This, of course, is not admissible during the stage of high excitement, but it often has a happy influence upon the patient to take him out in the open air for a ride or walk.

The overworked business man needs quiet and rest always and away from all sources of irritation and business care.

After the acute stage is passed, there is no febrile excite-

ment, no contra-indication, and convalescence seems gradually coming on. Some light occupation that does not require much mental effort nor induce too much bodily fatigue is very beneficial. If begun at the proper time, and under proper conditions, there is no treatment of greater advantage than a congenial occupation that will agreeably attract the patient's mind and divert him from his delusions. There, however, should be no excitement attending it.

Amusements, when judiciously selected, are often enjoyed by those who are not too much excited by them or are too demented, and it is one of the means of treating these patients, often with good results. Music is a source of great enjoyment to many, and has a pleasing and soothing influence upon them. To a great many it has a peculiar charm, but there are a few upon whom it has the opposite effect, greatly excites, and will sometimes drive them to suicide if the opportunity should offer, and these belong mostly to the class of melancholiacs.

The influence of good association is often made manifest. They should be carefully guarded against any form of religious excitement or impressive religious services.

There are many cases where the trouble may come on very suddenly, developing rapidly, and in a few hours may assume a violent character. Premonitory symptoms may or may not have been noticed. In some, after a short duration of a hurricane-like storm, it passes off as suddenly as it came on. They all usually have exciting causes, sudden mental shock, fright, loss of a relative, a surgical operation, sudden withdrawal of morphine when the habit has been established, an accident, loss of fortune, sudden illness, the acute diseases, mental strain, religious excitement during religious revivals, attendance upon spiritualistic seances, and many other causes. These cases are liable to come under our observation and treatment at any time, and the first duty will be to remove, as far as possible, all sources of the exciting cause, forbid any person to go in his presence

except those absolutely necessary to care for him. He should be carefully nursed, quieted down, all excitement allayed by hyoscine or some other potent drug, or, if practicable, by other means; the hygienic surroundings put in the best possible order; as good a nurse as can be had given him, with full instructions as to what his duty should be.

It is never good practice to deceive the insane, as a majority of people are inclined to do. While there are many things liable to come up that it would not be judicious to admit to them, it is always best to be frank and truthful with them. This may sometimes cause a racket at the time, but it will prove for the best in the end. Intimidation should not be practiced. It is always best to use the utmost kindness and gentleness; at the same time be firm and unyielding; impress the patient with the fact that we are in control and are masters of the situation when we are satisfied it is for his best interest. His whims and delusions should always be respected in his presence and humored when no special harm can come of it. To contradict him and to try to convince him against his will by argument often proves injurious by exciting his passions that are easily aroused. If we can secure the services of a good reliable companion, and the patient can afford it, we can sometimes ward off a threatened attack, when gradual in its approach, by sending him on a tour; let him travel; the change is often very beneficial; and so it will be in many patients who can be controlled when the crisis has passed and convalescence has set in.

Melancholia is of longer duration, more difficult to treat, and more tedious than any of the curable forms of insanity, and those who compose this class are more prone to suicide. They do better by being taken away from home, or, if that be not practicable, by being isolated and closely guarded. The watching of an insane patient should, if possible, be done without his knowledge, and there should be invented some plausible excuse for the presence of the nurse when he protests against it. It is useless, in most cases of well

marked melancholia, to try to force them to take exercise against their will, or to send them on a journey, or to insist upon taking them into society, or prescribing amusements when at or near the crisis of their disease. Even sometimes long before and after this period, it only heightens their gloom, and is liable to make them more desperate. When convalescence begins, and they show more interest in their surroundings, these measures will be of avail.

They should be fed generously. They usually have but little inclination to eat, though I have seen some of them eat ravenously. It is very important to look after their excretions. Constipation, if not the rule, is very common with them. Cannabis indica is a valuable remedy in this form, and it is the one class where opium is admissible—not in every case. Many authors advise opium as one of the best drugs. Gray likes the aqueous extract in doses of the eighth of a grain *ter die*. Bromides do good when there is much restlessness, and some one of the hypnotics above described when they cannot sleep.

In some cases of insanity a resort to surgery will be the only means of relief. It may be a reflex action from a distant diseased organ that causes the mental trouble, and its removal may relieve, but such cases are rare. Depressed bone should be elevated, abscess of the brain opened, and cavity washed and cleaned antiseptically; a tumor removed, a cicatrix of the scalp or membrane cut away. Sometimes a serous effusion may be removed through a trephine opening, and thus relief obtained.

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Have adopted an attractive advertising measure in furnishing blotters to physicians who request them. These blotters are useful on the writing table or desk, and are artistic in design and workmanship. The color work is done by the same process as was their calendar for 1894, which was done in their own printing establishment in Detroit.

ART. VI.—A Series of Twenty-Five Abdominal Sections.

By I. S. STONE, M. D., of Washington, D. C.

My first hundred sections were completed in February of 1893. My second hundred is now nearly completed, and I purpose reporting these in four series of twenty-five each, as they are taken from my case-book. With one exception, all operations in this list were performed in Columbia Hospital.

In this list three deaths have occurred. This would have been the experience of any (better) operator who never refuses to operate in any case requiring surgery, unless the fatal hysterectomy may be taken as an exception. This woman died of apparent shock. There was no hæmorrhage. She had no peritonitis. The operation was not unduly prolonged.

The other two deaths would have speedily occurred without surgical aid. One from general peritonitis—the other from sepsis and pressure of a large tumor, which I hoped might prove to be of ovarian, rather than uterine origin. This case was true to the rule in the negro race, as far as my experience goes. I have not yet found an ovarian cyst in a negress. (The one coming nearest was a broad ligament cyst in a mulatto. This cyst and contents weighed twenty-five or thirty pounds, and was removed in September last.)

I have yet to find any case of recovery after the removal of a suppurating fibro-cyst of so great size. Drainage was required in all but two of the cases here reported. Nearly all operations for diseased appendages were done to check the ravages of specific infectious disease, and the writer still drains every one which ruptures and requires flushing.

CASE I—March 1st, 1893.—*Ventral Hernia—Recovery.*—Miss M., aged 20+. Previously operated upon by another surgeon for pyosalpinx. A portion of one tube remaining filled with pus. The tube removed, and the hernia closed. Drainage.

CASE II—March 5th.—*Pyosalpinx—Recovery.*—Mrs. M., aged 30. Uneventful, except slight attack of pleuritis. Drainage.

CASE III—March 8th.—*Fibro-Purulent Tumor of Uterus.* Sac 10 pounds—Pus 60 pounds—*Death*—Mrs. W., aged 45? (Reported in *Va. Medical Monthly*, April, 1893.) A forlorn hope operation. The tumor had a very small pedicle, and yet was adherent to almost everything. Operation one hour. Died when operation was completed.

CASE IV—March 13th.—*Pelvic Abscess—Recovery.*—Miss —, aged 29. This abscess was tubo-ovarian in origin. It had been discharged through the bowel once and through the vagina at least twice. The operation was difficult, and lasted one hour.

CASE V—March 13th.—*Hæmatoma of Broad Ligament—Recovery.*—Mrs. M., aged 25. Patient had pain, collapse, and all symptoms of ruptured tubal gestation sac. No fœtus or corpus luteum could be found, however, and Dr. Lamb, the pathologist, declined to admit this a case of ectopic gestation. The tube plainly showed the seat of rupture into the broad ligament.

CASE VI—March 15th.—*Peritonitis from Pus in Pelvis—Death.*—Miss B., aged 24. Double pyosalpinx, ovarian abscess on one side. Operation failed to check the peritonitis. Patient refused all food, purgatives, enemata, or any aid from nurses. Very perverse and ignorant.

CASE VII—March 18.—*Salpingitis, Hydrosalpinx—Prompt Recovery.*—Mrs. G., aged 43. Long history of pelvic pain and inflammation. Reported to have had two operations for cancer of cervix. (?) No drainage.

CASE VIII—March 22.—*Gonorrhœal Pyosalpingitis—Prompt Recovery.*—Miss A., aged 23. Plenty of pus found on both sides. Drainage.

CASE IX—March 25th.—*Uterine Fibroma, five pounds—Death*—Mrs. A. Easy hysterectomy, complete extirpation. Operation lasted one hour. Shock came on gradually during the night after operation. No peritonitis found at autopsy on third day. This my only death after so small a tumor as five pounds.

CASE X—March 27th.—*Double Salpingo-Oöphorectomy—Prompt Recovery*—Mrs. F., aged 35. Tubo-ovarian abscess. Drainage.

CASE XI—March 30th.—*Salpingitis and Hydrosalpinx—Recovery*—Miss G. Double salpingo-oöphorectomy. Drainage. Wound infected; otherwise excellent recovery.

CASE XII—April 1st.—*Pelvic Abscess and Pyosalpinx—Recovery*.—Mrs. A. Bowel closed where old sinus was torn through. Appendages removed in twenty minutes. Repairing bowel and closing wound, etc., forty-five minutes more.

CASE XIII—April 4th.—*Tubo-Ovarian Abscess Right Side. Left Pyosalpinx, fimbriated extremity adherent to bowel—Prompt recovery, but leaving sinus through drainage tract*.—Mrs. K., aged 23. This patient had tubercular disease of peritoneum, which prevented closure, and eventually caused her death. Will be referred to again later.

CASE XIV—April 8th.—*Extra Uterine Pregnancy, three and one-half months—Recovery*. Primary rupture in left broad ligament. Patient in very anæmic and feeble condition when operation was done. Sac secured to parietal peritoneum; dead fœtus removed. Iodoform gauze packed in wound to check hæmorrhage. Placenta came away in fragments, completely in two weeks. Quick operation. Patient made uninterrupted recovery after the first few days of anxiety. Much blood in sac from separation of portion of placenta.

CASE XV—April 12th.—*Double Salpingo-Oöphorectomy for Fibroid of Uterus to Umbilicus*.—Mrs. W., aged 28. Had long suffered great pain and much loss of blood at periods. Large cystic ovaries. Hydrosalpinx. Prompt recovery.

CASE XVI—April 15th.—*Double Salpingo-Oöphorectomy*. Miss G., aged 30. Fibroid of uterus size of cocoanut. Prompt recovery.

CASE XVII—April 15th.—*Cholelithotomy—Recovery*.—Mrs. M., aged 32. A stone impacted in cystic duct prevented closure of sinus from former operation by myself. Complete recovery after this.

CASE XVIII—April 19th.—*Pyosalpinx Abscess of Ovary. Prompt Recovery*.—Miss B., aged 23. Had previously had operation for pus by another operator eight years since. Line of old incision thin, but not sufficient to permit hernia. Operation twenty minutes. Drainage.

CASE XIX—April 22d.—*Infected Ligature—Symptoms of Pyosalpinx*.—Mrs. W. Patient had undergone operation for pyosalpinx by another operation several months since. Had slow recovery. Looked like a case of tuberculosis. After tedious separation of adhesions of bowel to bladder, uterus and broad ligament, the cause was found in an infected ligature. The intestinal wall was greatly thickened, and required careful suturing to prevent necrosis and rupture

after this operation. Much shock after this prolonged operation, then slow but good recovery.

CASE XX—April 29th.—*Closure of Old Fecal Fistula resulting from Use of Wire Clamp in Operation for Supra-Vaginal Hysterectomy by another Operator.*—Mrs. R., aged 35. This fistula was closed for two months, then opened again. Re-infection from tract of former pedicle. (Note.—This was afterwards permanently closed.)

CASE XXI—May 1st.—*Gonorrhæal Infection of Tubes and Ovaries.*—Miss M., aged 18. Complete removal during acute peritonitis. *Recovery.* Drainage.

CASE XXII—May 6th.—*Hysterectomy for Tumor.*—Mrs. W. Attempted oöphorectomy; failed to check hæmorrhage; compelled to remove entire growth. Operation eighty minutes, including time lost at commencement. Prompt recovery after rallying from shock. Tumor extended above umbilicus; probably weighed seven pounds.

CASE XXIII—May 10th.—Mrs. F., aged 23. *Double Salpingo-oöphorectomy* for specific salpingitis ceptic ovary and hydro-salpinx. Operation twenty-eight minutes. *Recovery.*

CASE XXIV—May 11th.—*Salpingo-Oöphorectomy.*—Mrs. H., aged 27. Left tubo-ovarian cyst ten ounces, with pyosalpinx of corresponding tube. Right salpingitis. Prompt recovery. Operation twenty-five minutes. Drainage.

CASE XXV.—*Appendicitis in Male.*—Age 28. Large abscess evacuated and drained. Small gall-stone found in abscess. *Recovery.*

ART. VII—Some Nervous Effects of Digestive Disorder.*

By A. K. BOND, M. D., of Baltimore, Md.,

LECTURER ON DISEASES OF CHILDREN IN THE BALTIMORE MEDICAL COLLEGE.

Ever since the beginning of medicine, it has been well known that soluble poisons, taken into the mouth, will pass through the walls of the digestive canal into the blood, and so produce serious, if not fatal, disturbance of the general nervous system. And it has been long suspected that, from the contents of the digestive canal itself, poisons are sometimes elaborated which, when absorbed into the blood-cur-

* Read by title only before the Medical and Chirurgical Faculty of Maryland, at Annapolis, November 22, 1893.

rent, produce equally deadly, though perhaps less rapid, disorder of function in the great nerve centres. Accurate knowledge in regard to this latter subject was, however, impossible in past generations, because of the impossibility of distinguishing the symptoms due to this cause from those due to auto-intoxication of the body by retained excretion-products in the blood. In recent years clinical observation, aided by laboratory research, has not only isolated and named some of these poisonous digestion-products, but also traced with considerable accuracy the symptoms which they cause.

It is true that, up to the present time, only a few such substances have been studied; yet the revelations made of their action are such as encourage us to believe that the source of very many disordered conditions of the blood and nervous systems, hitherto inexplicable, is in the digestive canal. It has been suggested that all such forms of auto-intoxication be grouped under the title of stercoræmia; but this term is much too narrow, indicating, as it does, absorption of hurtful matters from but one portion of the digestive tract—the large intestine.

The very interesting condition known as diabetes mellitus is believed to be, in most cases, associated with digestive derangement. My own limited observations lead me to believe that its nervous phenomena are, in some instances, very directly dependent on imperfect digestion. I have an elderly patient, several years diabetic, who can eat with impunity at a friend's house, amid cheerful company, starchy and even saccharine substances, which, at home, where digestion was not stimulated by diverting conversation, would, shortly after ingestion, produce dryness of the mouth, itching of the skin, and other nervous phenomena.

IN HYSTERICAL STATES.

Experience in the management of the more acute nervous attacks of the class usually termed "hysterical," has taught me that the administration of a few moderate doses of calomel is of very great value, since it will, in nearly all

cases, cut short the bizarre manifestations of irritation of the centres of brain and cord, or at least will render the patient more responsive to the ordinary nerve sedatives and tonics. I mention calomel because it is more easily administered and better retained in many of these cases than any other drug, being taken in tablet with sugar of milk, and eaten without even the administration of water. Any other thorough aperient which could be applied would probably be efficacious, for I believe that many of these much-despised and much-to-be-pitied patients, stigmatized as hysterical, are really suffering from acute or chronic auto-infection with intestinal matters.

IN THE "STATUS GYNÆCOLOGICUS."

It is the more easy to believe this if we recollect that that most troublesome assemblage of nervous symptoms which seem to be or are associated with disturbance of the sexual organs of woman—the "status gynæcologicus," if I may be permitted to give it a name—which is only too familiar in modern practice, is with almost unerring certainty modified for the better by thorough and persistent evacuation of the bowels.

As far as I have been able to think the matter out, the explanation of the "status gynæcologicus" is this: Woman is built upon a great net-work of nerves which have to do with her sexual nature. This net-work lies closest to the surface of her consciousness at a number of points—in the uterus, in the ovaries, in the mammary glands, behind the scapula, in the small of the back, along certain "girdle regions" above the mammæ, below the mammæ, and along the upper asternal ribs. In health, these nerves are hid from her mental view by the distracting occupations of daily life. Any condition, however, which lowers her general health, disturbs the nervous system, and turns her attention in upon herself, will set these nerves of sex vibrating, even though no marked local disease can be found in the regions where the symptoms manifest themselves. In women whose nerve-force has been greatly lowered, by

whatever malign influence, the physician may almost certainly detect, upon questioning or upon palpation, a "spine-ache," a "breast-ache," an "ovary-ache," or a "womb-ache," though there be absolutely no local disease in any of these regions and although the patient's sexual life has been wholly normal. In such patients, with lowered nerve-force, local pains in these sex-nerves are readily called forth by local disturbance in other organs not of the sex-system.

An anal fissure, a diseased kidney, perhaps even a strained eye-muscle or a decayed tooth, may excite pains and other symptoms in the sex-nerves.

Among such causes, digestive disorder ranks high, if not highest. In cases due to such disorder, the agent which clears out the bowels and restores the intestinal secretions strikes at the root of the ache in the sex-nerve; and the agent which binds up the bowels and hinders intestinal secretions prolongs and establishes the ache of the sex-nerve, even though, like opium, it temporarily deadens the pain.

A very striking illustration of this fact occurred in my practice recently.

I was asked by a young physician to see a patient who had been under treatment by a gynæcologist, then out of town, for cancer or ulcer of the cervix uteri.

The patient had within the last week been suffering from violent paroxysms of pain in the lower abdomen, supposed to be due to inflammation of the internal sex-organs. For the first paroxysm of pain a hypodermic of morphia had been given, with the effect of soothing the pain and restoring the patient to comfort. Next day the paroxysm recurred, yielding to the same treatment. During the days which elapsed before my visit, the paroxysms had increased in number to several a day, requiring several hypodermics a day for their control. I was fortunate enough to find the patient in a paroxysm. It had begun with severe pain in the lower abdomen and had increased in intensity until the lower limbs were thrown into tonic spasm, the patient being in an agony. Observing that the feet had very much the position assumed in general "hysterical" convulsions, I suspected that the source of the pain was in nervous irrita-

tion, and not in pelvic inflammation. Although the bowels had been slightly moved by daily enemata, I thought it very likely that the original paroxysm had been excited by irritating matters in the bowels, and that the daily increase in the number of the paroxysms was due to the influence of the morphia in shutting up these irritating matters within the bowels; the probability being that, if the bowels were not thoroughly cleansed, the patient would become an opium-eater. The event proved the theory, for after several doses of epsom salts, producing free catharsis, there was no return of either pain or spasm.

The more thoroughly I learn the uses of aperient medicines, the less frequently do I have to use opiates, either by the mouth or hypodermically.

IN THE PSYCHIC SPHERE.

Leaving now the realm of gynæcology, I shall endeavor to state clearly the grounds for my conviction, that sudden yet persistent disturbance of the general nervous system, in its psychic, motor and sensory departments, may arise from abnormal conditions within the intestinal tract; and that this disturbance, though in some cases so intense as even to imperil the life of the patient, may be dependent on merely functional disorder, sometimes apparently unworthy of consideration, sometimes wholly unsuspected.

From personal experience, I have learned that hurry during meals, or worry while the process of digestion is going on, will frequently be quickly followed by *mental depression* and general lassitude, which may last until a night's rest is secured or a moderate dose of some simple aperient has had its effect. I once thought that this sudden change of nerve state might be due to unwholesome articles of diet; but careful thought showed that, in all probability, it was due to a check of the digestion process, resulting from the hurry and worry—modification of diet having no influence upon it. That chronic indigestion would lead in some unknown way to fogginess of mind, I well knew; but the suddenness with which the mental processes could be disturbed by disturbance of digestion was new to me. That

such disturbances, even associated with passing feverishness, are likely to occur in sensitive adults is *a priori* probable, if we consider what a large part they play in the causation of the febricular, nervous and convulsive disorders of childhood. I believe that there is a great group of minor ailments in the adult, whose origin is obscure, but really lies in the digestive canal. This group of ailments has in succeeding generations received various names. Once known as "obscure gout," again as "biliousness," it is now dubbed "obscure malaria." Quinine, the digestive bitter tonic; rest in bed, the great digestive calmative; aperients, the great digestive regulators—all are beneficial therapeutically. It is possible that these conditions are in some, if not in many instances, really identical with those perversions of assimilation which, fully developed in predisposed individuals, produce gout.

IN THE MOTOR SPHERE.

With reference to the influence of these abnormal digestion states upon the *motor* nerve-centres, I can cite from notes taken in my practice several instances in which violent convulsions seemed to so originate. I will mention only a few such cases.

In December, 1891, I attended a middle-aged woman (not otherwise nervous) for violent epileptic convulsions, lasting nine hours in spite of chloroform, nitrite of amyl and enemata of bromide of potassium—the patient being unconscious in the intervals between the convulsions and unable to swallow. Drop doses of croton oil in castor oil brought away a quantity of very foul matter from the bowels. In April she had one similar convulsion; croton oil in pill with other cathartics again relieved the bowels of masses of very foul tar-like fæces.

In June, 1893, I was called to a case of measles in a powerful blacksmith about twenty-five years of age. The rash was but slight on its third day, and he was chilly, nauseated, and costive. Free bowel action from calomel, with hot applications, reduced the temperature to 102° in mouth, brought out the rash freely, and made the patient more comfortable. On the 9th day of rash the eruption had

faded considerably and he was peeling on the face. His bowels had not moved for two days, and he was restless in sleep. The temperature in mouth was 100° . No urinary disorder apparent. A mixture containing one-fifth grain codeia was being taken for slight chest soreness. Suddenly he waked out of sleep with delusions and restlessness, and during the two days following he was furiously delirious. Whiskey, bromide of potash, chloral hydrate, morphia hypodermically and ice to head were all of no effect. Finally the bowels moved freely from magnesium sulphate and water enemata, and he got to sleep for several hours; another foul passage then passed, and convalescence was thenceforth normal. He had often in past years had indigestion spells accompanied by slight delirium and feverishness.

As there had been nothing apparently abnormal about the lungs or other organs, I was forced to the conclusion that the furious delirium just described was due to foul changes in the bowels, perhaps excited by some hindrance to intestinal secretion due to the action of the codeia, although I had never before known that drug to produce any more serious derangement than a slight dryness of the mouth.

IN THE SENSORY SPHERE.

In quite a number of cases I have seen very grave disturbance of the *sensory* nerve-centres produced, in all probability by these digestion derangements. In November, 1889, I reported such a case to the Baltimore Academy of Medicine.

The patient had been markedly debilitated by a palmar abscess. Just as he was about to return to work again he ate some huckleberries. The same night about 12 o'clock he was seized with pains in the stomach and vomiting of bile. From this time for one month he suffered from most alarming symptoms, which seemed likely to end in death. At various times in the day or night severe sudden pains in various parts of the abdomen would occur, with accumulation of flatus in the bowels, powerful tonic spasms of their muscular walls, and sometimes slight passive hæmorrhage from one or other of the mucous surfaces—stomach, rectum, bladder, or respiratory tract. These periods of

pain, spasm, flatulence and hæmorrhage would alternate in a most unaccountable manner with periods of comparative comfort. Opium and other remedies gave only temporary relief. Apparently sufficient action of the bowels was again and again secured by senna, grain doses of calomel, etc. There was no jaundice, no disturbance of the intellectual powers, no local inflammation perceptible, but excruciating cramp pains with great prostration of the bodily powers, brown, gradually hardening, tongue coating, and moderate fever.

About the end of a month from the onset of the illness, I found him vomiting bile and determined to purge him severely with calomel. For two whole days he took calomel and bicarbonate of soda, of each two or three grains three times a day, until his mouth became somewhat sore. With each calomel passage he felt better, and three days after the calomel course was begun he was evidently convalescent—the tongue cleaning, the fever subsiding, the pains permanently ceasing, the appetite returning, and no treatment save a mouth-wash and mild expectorant being needed. In three days, under free purgation, he had passed from the brink of the grave to full convalescence.

My belief is that the disease was an auto-intoxication by digestive matters, very similar to ptomaine poisoning from cheese. The pains in the abdomen were excruciating, and only changed their location apparently along with the bowel spasms.

My attention was again very forcibly drawn to this subject of intestinal sepsis during the recent pandemic of influenza. Certain cases were characterized by dull, aching pains in the body and limbs, sometimes in the head, and by offensive breath, large, dull-red tongue, brown-slimed in the middle and pearly moist at the edges, and moderate fever. In these cases full and repeated doses of castor oil seemed most beneficial, relieving to a considerable extent the pain and bringing away large quantities of soft faecal matter of most horrible odor. Nor were the pains permanently relieved as long as intestinal foulness continued.

In April, 1893, I was called to attend a young married woman who suffered from acute gonorrhœa of the genital tract. For her pelvic pains I ordered three suppositories,

each containing pulv. opii gr. j, extract belladonna gr. $\frac{1}{8}$. Next day she became seriously ill, with shifting pains in various regions of the body, vomiting of bile, obstinate constipation, and stoppage of lacteal secretion. Epsom salts and calomel in moderate doses failing to move the bowels, I endeavored to open them by irrigation through a Langdon rectal tube, for which much has lately been claimed. In spite of careful posture and patient manipulation, I could not pass it up more than a foot or eighteen inches into the rectum, which seemed to contract spasmodically about it; and irrigation with warm water and afterwards with sweet oil failed to produce evacuation. I then gave her pills containing oleum tigllii gtt. $\frac{1}{2}$; extract colocynth co. grs. ijss; extract belladonna gr. $\frac{1}{8}$. The bowels were freely moved by this and the pains subsided. Recurrent milder pains were permanently relieved by compound cathartic pills, in which the calomel was replaced by resina podophylli.

While preparing this article, I have been in attendance upon an intelligent medical student, who was taken about two weeks ago with pains, beginning over the rami of the right pubic bone and spreading downward, until the whole adductor region of the thigh was the seat of steady, excruciating pain, the muscle-fibres jerking as they would under the Faradic current. A half grain of morphia, given some hours before my first visit (November 10), did no good. I applied hot cloths, and gave chloral hydrate with potassium bromide in solution, which was at once vomited. Five grains of calomel failed to produce evacuation. A hypodermic of morphia, gr. $\frac{1}{4}$, was ordered every four hours, as needed, and moderated the pain considerably, but it returned again. At my visit the second day, I ordered ol. tigllii, one drop made into four pills, with compound extract of colocynth and extract of belladonna, ordering one pill in the afternoon, two at sleeping-time, and one next morning. By the aid of repeated enemata, evacuations were secured, and the pain became easier. Gradually the morphia was dropped, the enemata being repeatedly used, and salicylate of soda being given, ten grains every four hours. The salicylate did no good, and was replaced by iodide of potassium; this gave temporary relief and produced mild iodism. The pains again returned, but the patient had come round to my view, that they would continue to return whenever evacuation of the bowels was delayed, and so got himself relieved of his pains by repeated enemata of water, which

brought away very offensive feces. The patient told me that he had, in former years, sometimes been confined to bed for a month with these attacks, and that he believed he had frequently aborted them just as they were coming on by large repeated doses of calomel.

The limits of this paper forbid discussion of the possible agencies, chemical or living, by which intestinal sepsis of the nervous system is produced. Pathological chemistry and bacteriology may perhaps some day reveal them to us. Presenting the subject from a strictly clinical point of view, I trust that I have shown that there is a group of disturbances, in the sexual, mental, motor and sensory departments of the nervous system, which are due to oftentimes obscure, sometimes unsuspected, disorders of digestion and of the assimilation of digestive products; and that these often perilous disturbances, though temporarily soothed by opiates and other anodynes, require for permanent cure the thorough cleansing and restoration to normal function of the digestive tract.

889 *Park Ave.*

One of the Mellier Drug Company Advertisements,

By some oversight, was omitted from January and February numbers. We trust that our loss will be their gain, by thus prominently asking subscribers to refer to the "Index of Advertisements" for their two half-page advertisements—one of "Tongaline" and the other of "Ponca Compound"—both good and popular remedies.

For Multiple Warts of Face—(Kaposi).

R.—Sulphuris sublim.....	3v
Glycerini	3iiss
Acid acetic.....	3iiss

S.: Apply locally to each wart for several days.

The warts dry up and drop off.

ART. VIII—**Summer Complaint.***By **W. E. FITCH, M. D.**, of **Graham, N. C.**

An old volume of Eberle's work, written, perhaps, seventy years ago, gave five or six classifications of diarrhœa. In the old French Encyclopædia, no less than twenty forms of the disorder are given; and even in our modern time, it is quite the thing to speak of inflammatory and non-inflammatory diarrhœa. Again, we have diarrhœa spoken of as a catarrh of the small and of the large intestine, or combinations of these, according to symptoms present.

My effort will be to give a classification of diarrhœa which can be clinically recognized, and which can be put somewhat on an etiological basis. It is very good to classify diarrhœa on morbid anatomy; but if you can go beyond that, and classify it on an etiological basis, I think you will have made one step in advance.

Since there are so many names and classifications for diarrhœa, some of which may be misleading, I prefer, when speaking of these diseases, to use the term "summer complaint." So wide is its symptomatology, and so numerous the etiological factors concerned in its production, that it may be considered a group of diseases rather than a single affection.

By the term summer complaint, as here used, is meant a form of bowel disorder of infants characterized usually by diarrhœa, sometimes by constipation, and accompanied by more or less well-marked symptoms traceable to the central nervous system. I would like to define summer complaint as a disease caused by putrefaction or fermentation of the intestinal contents, from which poisoning results, either directly by their acting upon the intestinal walls, or indirectly by the poisons themselves acting secondarily upon the nervous system, and producing various symptoms. The diarrhœal forms of summer complaint are to be differentiated from the symptomatic diarrhœa of specific diseases and those occurring in various septic processes.

* Read before the Alamance County Medical Society, 1893.

All the principal factors which have been recognized as possessing an etiological influence on this disease, will be found to fall into one or the other of the following three classes: *First*. Means favoring the contamination of food with micro-organisms, and facilitating their development therein. *Second*. Means of introducing micro-organisms or contaminated food into the child's stomach. *Third*. Influences diminishing the child's resistance.

As Eschirich has shown, the meconium of the newly-born soon becomes the habitat of a varied flora; but with the disappearance of the meconium, and the establishment of the milk-stools of the normally fed and healthy infant, the varied flora disappears, and in its place a flora is found characterized by the marked predominance of two species—viz: The bacterium *lactis aërogenes*, in the upper part of the intestinal tract, and the bacterium *coli commune* in the lower part. This condition continues so long as the diet is limited to milk, and the child remains well. But with the advent of summer complaint, a diversified flora again makes its appearance.

With a view to differentiating, as far as possible, the various fermentative processes which the micro-organisms induce in the intestinal canal, I have directed my attention to the *odor of the stools*, and have been much impressed by the readiness with which, by the odor alone, at least two general classes of fermentation can be distinguished. In the great majority of cases, without the use of direct questions—mothers, even of very moderate intelligence, will describe the *odor of the stool as either sour or putrid*.

This classification corresponds to the two great classes of food stuffs. The known fermentation of the carbohydrate foods all lead to the development of acids and gases. *Under no circumstances can carbohydrates yield products with a putrid odor*. On the other hand, *proteids yield either odorless or putrid products*. The intestinal tract of the infant differs from that of the adult, in the superabundance of lymphoid tissue present. This tissue is essentially absorptive in function. This function is of great importance to the healthy

and rapidly growing infant, but becomes a great drawback when pathological processes develop absorbable poisons in the intestines.

The work of Prof. L. Emmet Holt, of New York, has given a very clear insight into the morphological changes which occur in the intestines in this disease. These changes may be briefly described as consisting of—first, swelling of the lymphoid tissue, next its death, then sloughing, and finally, extension of the ulceration to adjacent intestinal tissues, terminating rarely in porfuration of the peritoneal coat.

The principal seat of these changes is in the follicles of the large intestine. These several changes occur somewhat slowly, and extensive ulceration is not established until the disease has continued about three weeks. These statements are general, and are not to be regarded as absolutely true in all cases, or unmodified by special symptoms or conditions. It is particularly important, however, to recognize that these changes are progressive as to time, and that very severe cases, those which terminate fatally in twenty-four to forty-eight hours—so-called cholera infantum—do not present the morphological changes which occur in summer complaint.

The important symptoms of the disease are those referable to the gastro-intestinal tract, to the central nervous system, and the kidneys. Of the nervous system, the most important are the depression, wakefulness, drowsiness, coma, convulsion, and fever. The diarrhœa itself is salutary; the number of stools, generally speaking, is unimportant; even where the number of movements is very great, the accompanying depression is probably only in part due to the serious drain.

Every physician who has witnessed summer complaint of infants and children is aware that the mode of feeding has much to do with its occurrence. A large proportion of the little ones who fall victims each summer to this disease would doubtless escape if the feeding was exactly proper. Infants under the age of eight months, if bottle-fed, nearly

always contract summer complaint, and usually of an obstinate character, during the months of July and August, and more especially if reared in a city. The younger the infant, the less liable it is to digest any other than breast-milk. And the more liable it is, therefore, to suffer from summer complaint if bottle-fed. Sudden weaning, the sudden substitution of cow's milk, or an artificially prepared food, in lieu of breast-milk, in the hot summer months, almost always produces summer complaint, often of a severe and fatal nature. Feeding an infant in the hot summer months with indigestible and improper food, as fruits that contain small seeds, or the ordinary table foods prepared for adults, over-taxes the digestive function of the infant, and summer complaint is the result, and not infrequently that severe form of it which is described by the term "cholera infantum."

It is a common remark with the laity that the second summer is the period of greatest danger to the child. This increased liability to contract summer complaint in their second summer is due to the fact that most infants are table-fed during the second year, while in the first year they are wet-nursed. Such facts, with which all physicians are familiar, show how important the diet is as a factor in causing summer complaint.

Milk from cows stall-fed, and with little or no pasturage, eating grains and hay, is unsuitable, being deficient in nutritive properties, prone to fermentation; and, from microscopical and chemical examinations, it appears that it often contains deleterious ingredients. If milk is obtained from a farm where the cows are allowed to run where pasturage is fresh and abundant, the milk is far better, and not near so liable to cause an attack.

Another cause, one often overlooked by mothers, is insufficient clothing—allowing the infants to be exposed to sudden changes of the atmosphere, and exposed to air in the apartments after night. They contract an intestinal inflammation just as other infants contract coryza or bronchitis from the same cause.

But the most common cause of summer complaint is taking of improper food unsuitable for infantile digestion which therefore acts as an irritant; and, secondarily, from foul air, from water closets, manure heaps, pig pens and the waste from dye-houses connected with cotton mills where quantities of acids and chemicals are used, and from street excavations made during the months of June, July and August.

In large towns and cities the danger from foul air is much greater than in small towns and rural districts. That atmospheric heat does not in itself cause the summer complaint is evident from the fact that the heat in rural districts and large cities is the same; yet, the summer complaint prevails with greatest intensity in the thickly-populated cities. The impurities in the air of a large city are very numerous. Among those of a gaseous nature are sulphurous acid, sulphuric acid, sulphurated hydrogen, various gases of the carbon group, as carbonic acid, carbonic oxide, and gases of the nitrogen group, as nitric acid and nitrous oxide.

A theory deserving consideration is that certain gaseous impurities found in the air form purgative combinations, as pointed out by J. Lewis Smith in the *New York Medical Journal* (1890). One accustomed to the pure air of the country would scarcely believe how stifling and poisoning the air becomes during the hot summer days and close summer nights in a densely-populated city.

Summer complaint commonly begins gradually with languor, fretfulness and slight rise in temperature. The diarrhoea at first usually attracts little attention from its mildness. The evacuations, while thinner than natural, vary in appearance—being brown, yellow or green. Infants, with milk diet, usually pass green stools of a sour odor, containing particles of undigested casein. The tongue, at the beginning, is moist and covered with a white fur; later it may be dry, and in dangerous forms of the disease, the dorsum and edges may be red, and dry and swollen. Vomiting is a common symptom; it may commence simultaneously with the diarrhoea, especially if the food was undigestible

and irritating to the stomach; but most frequently this symptom does not commence till the second or third day of the disease. Emesis, occurring late in summer complaint, is often due to commencing spurious hydrocephalus, which is not an infrequent complication in protracted cases. When occurring as a late symptom, it is often due to uræmic poisoning, for the urine in advanced cases is quite scanty.

The character of the alvine discharges is interesting. The stools are sometimes yellow when passed, and on exposure to light and atmosphere become green, from chemical reaction due to admixture of urine, or the agency of the microbic theory that produces green coloring matter.

The pulse is accelerated according to the severity of the attack. The heat of the surface is at first generally increased, though but slightly in ordinary cases. But when the vital powers begin to decline from continuance of the diarrhœaic symptoms, the warmth of the surface diminishes.

In advanced cases, the face and extremities are cool and pallid. If the case is bending towards a fatal end, the imperfect action of the skin and kidneys is noteworthy. The skin is hot and dry. In protracted cases, there is marked weakness and emaciation, and not infrequently you will see a cutaneous eruption around the lower part of the back, buttocks and perineum, of an erythematous nature, and a furuncular eruption is often found on the scalp. The external irritation which it causes seems to be useful on account of the feeble heart's action and passive congestion of the brain and meninges, which is liable to be present.

When the progressive loss of flesh has continued for some weeks—the patient being much exhausted—another complication is liable to occur, known as spurious hydrocephalus. This complication may be recognized by the gradually increasing drowsiness, perhaps preceded by a fit of fretfulness, vomiting and rolling the head, a wild expression in the eyes, pupils becoming insensible to the light. Later, when drowsiness becomes profound, pupils may become contracted as in sound sleep or opium narcotism. The

functional activity of the organs is now diminished. The vomiting ceases; the stools become less frequent; the buccal surfaces become dry; the urine scanty; while the pulse is still frequent and feeble, when the hydrocephalic coma is profound, death is usually the result.

With the foregoing views as to the etiology, pathology and symptoms of the affection, *the treatment* will be directed on the following lines: *First.* The child's strength must be sustained, and in all efforts to cure the disease, its general welfare must at all times be closely watched; nor must its frailty be overlooked. Herein lies the field for the exercise of that judgment, by which all curative measures must be guided. *Second.* Removal of intestinal contents. *Third.* Regulation of diet. *Fourth.* Administration of intestinal antiseptics. *Fifth.* Combating special symptoms.

For removal of intestinal contents, several remedies are in vogue. Under no circumstances should the natural diarrhoeal discharges be trusted to bring about this effect. Calomel has proven more satisfactory with me, given every four hours, in one grain doses, rubbed up with sugar of milk, followed by the time-honored castor oil in proper doses, than any other drugs. For children under one year old, I make the dose of calomel one-half grain; generally after free evacuations are established, the number of stools will grow less; even under these circumstances the nervous symptoms will be much improved. But the persistence of dangerous nervous symptoms should invariably lead to the suspicion of retention of poisonous fæces. With the thorough emptying of the bowels—in which the poisons producing this disease are being elaborated—the bacterial culture has been removed from contact with the lymphoid tissues of the intestines; yet, the bowel has not been sterilized, nor can this ever be done. Nevertheless, the bowels can be freed of micro-organisms which have produced the poisons.

The method for accomplishing this has been pointed out by the changes which occur in the intestinal flora of the new-born at the establishment of the milk stools. To rid

the bowel of the pathogenic micro-organisms of the summer complaint, keep out of it the food on which they thrive; for this is the key-note in the dietetic management of these cases. Many practitioners withhold all food for twenty-four hours or longer (I used to do it). This practice will undoubtedly accomplish the end if carried out long enough; it is not, however, free from objection. It is difficult to get anxious mothers to understand its importance, and very difficult to secure their faithful adherence to it. And often it cannot be carried out long enough to accomplish the desired results. It would be preferable, if possible, to ascertain the offending food and withhold it—allowing at the same time foods which will not serve as a nidus to entertain the offending micro-organisms. In most cases this can certainly be done. When the stools are putrid, with an intensified fecal odor, they indicate the decomposition of proteid material. No other kinds of food can give rise to putrid odor except the albumins. In such cases it is clear to any fair-minded physician that albumins should be withheld.

But proteid decomposition occurs at times without the development of offensive odors, and with the development of poisons. On the other hand, putrid stools may continue for a long time—weeks, or even months, without the child apparently being any worse. In this class of cases, it must be seen that no poisons are being produced, or, if produced, are either not absorbed or are destroyed in the portal vein or liver. The proteid foods, one or more of which the child has been receiving, are milk, meat, fish, fowls or eggs.

Now, while you withhold proteid foods, one or more of the carbohydrate foods may be administered. Of these, arrowroot—being the most free from nitrogenous material—is theoretically the best. Yet, I have been unable to find anything that answers the purpose better than nice, clean, fresh soda crackers; rice may be allowed, but children often object and do not like it. I have often allowed baked potato without ever regretting it. With a diet of this type, *putridity* of the stools soon disappears, usually in from twenty-

four to thirty-six hours. Of course, it depends upon how thoroughly the bowels have previously been cleaned out. The change in the stools is not very important; it serves only as an index to the changes in the intestinal contents. It is most always attended by improvements in the systemic symptoms.

Many good physicians object to feeding starchy foods to infants, because of the deficient salivary and pancreatic secretions, which are held to be incapable of digesting starches. Practically this is not true, for every fluid contains a more or less active diastatic ferment; even milk has such a ferment, and besides, very young infants have digested starches. We have all seen too many children successfully fed on arrowroot to deny this. I do not wish to be understood as advocating a continuous starchy diet for infants.

The starch diet for a few days, or a week or even longer, can be trusted with perfect impunity; but continued for months it may set up a deplorable condition of affairs.

Sterilized milk as a food during summer complaint is properly considered in connection with the putrid form of this disorder. Sterilized cow's milk differs from raw cow's milk biologically but not chemically. Slight chemical changes do exist, but play no *rolé* in this connection, while they do modify the efficiency of sterilized milk as a nutrient for a long-continued diet. Sterilized is equally as rich as raw milk in proteid constituents, and like it can support the same micro-organisms, and can undergo the same putrefactions. Indeed, recent experiments have demonstrated the fact that many micro-organisms grow better in sterilized milk than in raw milk. Sterilized milk is valuable in the prophylaxis of summer complaint but not in its cure. The same is true of breast milk, which is a raw sterile milk, but I find in practice that I can more readily control summer complaint in a child that is wet-nursed than a bottle-fed baby. Where I can have the mother nurse the infant at regular stated periods and not too much at a time I do so. If this is not sufficient to keep the milk drawn, a breast pump should be used to keep the breast from swelling.

With the disappearance of the putrid stools, they either become normal or sour.

And this brings us to the dietetic handling of these little patients, and to the consideration of the *acid-smelling stools*. The acid fermentation is kept up by the sugars and starches, and to some extent by the fats. The acid fermentations are much less dangerous to the child than the putrid fermentations, because in them no systemic poisons are produced. The greatest danger of acid fermentation lies in the fact that they are capable of producing ulcerative lesions in the bowels, and in this way prolonging the disorder. The stools in acid diarrhoea are not only sour in odor, but frequently frothy from the formation of gases. Often the stools contain lumps of mucin precipitated from the mucus by free fatty acids. This form of the disease is usually accompanied by more pain than the putrid form, and chafing of the parts around the anus is quite common.

In treating this form of the disorder if you withhold all carbohydrates and put the child on cow's or breast milk, you will set up a putrid form of the diarrhoea, and transform a comparatively harmless form of the disorder into a harmful one. In mild cases you can still allow carbohydrates in small quantities; but if the case is severe and the child weak, withhold all carbohydrates for twenty-four hours, or until the tenesmus and tormania subside. On returning to food, milk alone should be allowed, as the carbohydrate which it contains (milk-sugar) is the least liable of any to continue the disturbances.

Whatever food is given in summer complaint should be carefully regulated qualitatively, and should be given in small quantities at regular intervals of considerable duration. Just enough food to maintain the child's strength is all that should be allowed. If the child is wet-nursed it should only have the breast at regular intervals—about every four hours, followed by the prescription which I will give later.

All attempts to disinfect the intestinal canal by medicines have been disappointing. Salol and the salicylates are of

but slight value. Calomel in small doses is more effective than the drugs above mentioned, but if given in too large a dose it often increases the disturbance by keeping up the diarrhœa. The subnitrate of bismuth, however, is a drug of great value. It approaches very near to the ideal disinfectant; but it must be given freely—ten to twenty grain doses every four to six hours. It will unquestionably act as an astringent, and the locking up of the poisonous fæces must be carefully watched.

The principal seat of the disease is located most often in the colon, and *lavage of the bowel* would be thought of by some physicians; but I have never had any success in the operations. Water, however, internally and externally, is of great importance. The child should be allowed all the Buffalo Lithia water from spring No. 1 that it can drink—the stomach permitting. The water should be kept in the original bottles in a refrigerator or some other cool place, and used instead of the ordinary drinking water.

Baths are practically useful, being stimulating and grateful to the patient, and securing needed rest. In most cases stimulants are indicated here. Good old French or *apple* brandy given in cracked ice, administered with Buffalo Lithia water above mentioned, which is a general tonic and stimulant.

In threatened collapse the child should be plunged into a hot bath—the bath performing a double function, stimulating the heart, and favoring the elimination, through the skin, of the poisons producing the depression. It is very important in the treatment of summer complaint to aid digestion—while we employ an antiseptic. The following is a prescription which I have used with the most happy results:

R.—Acidi hydrochlorici (diluted).... min. xvj
 Pepsini purum in lamellis.....ʒj
 Bismuthi subnitrat.....ʒiiss
 Syrupi simplex.....f. ʒij
 Aqua destillat.....f. ʒij

M—Sig.—Shake bottle, and give teaspoonful before

each feeding or nursing to an infant of one year. One-half teaspoonful to an infant of six months.

This prescription must be made fresh every second day and kept in a cool place, and then sometimes it will ferment.

The following is another prescription I have much used, and have been greatly pleased with :

R_y.—Bismuthi subnitrat..... ʒiij
 Pepsin saccharat..... ʒiss
 Salol ʒj

M.—Make charts No. 12.—Sig: One before or after each feeding or nursing to child of ten to fourteen months old.

Where the patient lives some distance from a drug store, the latter prescription is the one I most always use, because there is no danger of its fermenting, whereas the former one will ferment.

Opium is a drug much used and abused in this disease. In the acid form of the disease, while systemic poisoning is not present and where there is much pain and tenesmus, opium is indicated. Here the deodorized tincture is preferable, administered in chalk mixture with subnitrate of bismuth, which also has an astringent action. Still, however, the pain may be assuaged by heat, and the bowel movements controlled alone by bismuth, while the use of opium is *entirely* dispensed with. In the beginning of my professional career I treated all cases of summer complaint with opium, but lately I have the best of results from the plan of treatment advocated in this paper.

These opinions and this plan of treatment are drawn from my experience with summer diarrhœas, and I shall probably hold to them, so long as I obtain such pleasing results and such a low death rate as now.

For Pain in Ladies and Children.

R_y. Antikamnia..... ʒiss-ʒij
 Elix. simplici... ʒvj

M. Sig.—Two teaspoonsful every four to six hours.

Clinical Reports.

Ovarian Cyst—Laparotomy—Prolonged Delirium, etc.—Recovery.

By R. S. MARTIN, M. D., of Stuart, Va.

I have been induced to report this case from the fact that it presents some points which I hope will be of interest to the profession.

Miss E., aged 34, came to Mother's Home October 21st, 1893. She had been complaining of pains in the left iliac region since 1881. Five years ago, she noticed an enlargement in the left ovarian region. Menses regular up to two years ago; since irregular. Waist measure 86 inches, over prominent part of cyst 46 inches.

Diagnosis.—Ovarian cyst.

Treatment.—Tonics: nutritious diet and as much outdoor exercise as possible were prescribed, and laparotomy advised.

November 17th —With the assistance of Drs. Hughes and Preston and four ladies, I opened the abdominal cavity in the usual place, the incision being about three inches long, and found two cysts. One growing from the left side contained four gallons of molasses-colored fluid, which was drawn out with a trocar. The other cyst, on the right side, contained about one-half gallon of clear fluid. The sac of the large cyst was adherent to the omentum, tube, ovary, side of pelvis, and broad ligament, which seemed to be a part of it, and presented a vascular appearance. In drawing the sac out, the uterus and appendages came with it.

The omentum was ligated with cat-gut, and, after being separated from the sac, was dropped into the abdominal cavity; the tube and ovary were detached from the sac and removed in the usual way. The sac was cut off as near the adhesions as possible, the cyst wall was stitched into the abdominal walls by means of interrupted cat-gut sutures, the lining was enucleated, curetted, and the cavity packed with iodoform gauze.

The cyst on the right side was also adherent to the pelvic walls, broad ligament, tube, and ovary; this was detached

from the adhesions as rapidly as possible, and removed with the tube and ovary, using strong braided silk in ligating.

A considerable hæmorrhage had been produced by separating the cyst from the adhesions, and the patient's pulse warned us that her strength was fast failing. Whiskey, digitalis, and strychnia, were used hypodermically, and the cavity irrigated with warm Thiersch's solution and packed with iodoform gauze; this was the only means by which the hæmorrhage could be arrested.

Thus we had on one side (the left) the remaining part of the sac of the large cyst stitched into the walls of the abdominal cavity, and packed with iodoform gauze, with a small opening left through which to remove the gauze from the right side; on the other (the right) the cyst removed and the cavity filled with iodoform gauze. The patient, profoundly shocked, seemed to be in an almost hopeless condition; pulse 150, scarcely perceptible at the wrist. Hypodermics of whiskey, strychnia, and nitro-glycerine, were used.

The patient, as soon as her condition would permit, was removed from the table and conveyed to her couch, and bottles filled with hot water were placed around her. She rallied very slowly from the shock, and spent a restless night.

18th.—Temperature normal; pulse 140; vomiting contents of stomach. Begau with one-tenth grain doses of calomel given, one every half hour, until fifteen were taken. Owing to her anæmic condition, rectal feeding was used every six hours. Mellin's Food, dissolved in hot water, alternated with beef peptonoids, boiled milk, and brandy.

9 P. M.—Sulphate magnesia, one and a half grains, hypodermically, as recommended by Prof. Rohé, of Baltimore; this was repeated in six hours.

19th.—Patient spent a restless night.

8 A. M.—Temperature normal; pulse 136. Gave teaspoonful of Rochelle salts in one ounce warm water.

2:30 P. M.—Bowels moved; bladder relieved every six hours with catheter since operation; rectal feeding continued, and patient retains some nourishment on the stomach. A troublesome cough developed, for which a cough syrup was prescribed.

10:30 P. M.—Temperature 100.4°; pulse 144.

20th.—Patient in about the same condition; same treatment continued.

21st.—Symptoms of delirium; does not take nourishment willingly; fails to recognize those about her. Pulse and temperature about the same; requires the constant attention of two nurses.

22nd.—Removed gauze from the pelvic cavity; irrigated with warm Thiersch solution and re-packed; same treatment continued, with addition of one-fiftieth grain strychnia and five drops fld. ext. digitalis every six hours, hypodermically; the strychnia was increased one-thirtieth grain, and was then given by the mouth.

23rd and 24th.—Condition unchanged; still shows symptoms of delirium, but not of a violent character; passes her urine unconsciously, and sometimes feces.

25th.—Condition unchanged; pulse 140; temperature not over 100°. Gave at night for sleep—morphia one-eighth gr. chlor. hydrate ten grs., and potassium bromide twenty grs.

26th.—Good night's sleep, but delirium is more violent. She tries to get out of bed; when asked about it, she says she was dreaming; takes nothing willingly, and passes her urine unconsciously; same treatment continued.

She continued in this condition with no marked change until about the twenty-fifth day after the operation, when her delirium began to abate, and she passed her urine naturally, took nourishment at stated intervals, and rectal feeding was discontinued.

Six weeks after the operation she was able to go about, and at this writing, February 1st, is getting ready to go home (?) entirely relieved.

The cavity in the right side closed in about three weeks, was packed with iodoform gauze every third or fourth day; the left side required more care, with an occasional curetting, the use of carbolic acid, and packed with gauze, always under careful antisepsis; it filled up, and was well by the third month after the operation.

Masturbation in a Female Child Eleven Months Old.

By N. L. GUICE, M. D., of Meridian, Miss.

Masturbation in a child so young as eleven months is a condition sufficiently infrequent to warrant the report of a case coming under my observation in September, 1893.

The patient was X. Y., a female child aged eleven months, of healthy parentage and with no constitutional taint. The

parents are both in possession of vigorous health. The mother, a primipara, is of nervous temperament.

At birth the child weighed ten pounds, was well formed, and in all respects healthy. At the age of about three months, however, she became the victim of diarrhœa or summer complaint, and this probably from improper food, given in conjunction with the breast milk, of which the mother, so far as I could learn, furnished an abundance.

Under the management of other physicians, the diarrhœa continued unceasingly up to the age of ten months, when she came into my hands. The child was then greatly emaciated, pale, and anæmic, the skin hanging in folds over the face and limbs. Fever was occasionally present, the temperature ascending as high as 101° . The alvine discharges were composed chiefly of undigested and fermented food with flakes of mucus. The weight of the child was now eleven pounds, being just one pound more than at birth. The diarrhœa proved exceedingly obstinate; but under suitable diet and medication, there was some progress toward a cure at the end of a month, though the emaciation was still extreme.

At this time, the mother called my attention to what she thought "peculiar conduct," on the part of the child; and explaining that it had commanded her attention for several days, and was steadily growing more prominent and persistent, placed the child on the bed that I might witness a practical demonstration of what she had sought to explain. Immediately the fingers of the right hand were firmly placed upon the vulva and the left leg brought across the right in position to increase the pressure, and was thus held in a condition of rigidity. Thus the child lay upon the back with the entire voluntary muscular system in a condition of tonic rigidity, the eyes closed and face and lips distorted. The fact that pleasure was experienced by the little victim was clearly evident; and when caused to desist, she would cry vigorously. Let alone, she would at once resume the practice, taking always precisely the same position.

The practice had now become almost continuous when out of the arms of mother or nurse, and food was generally refused. Upon examination, the vulva was found to be normal, excepting the clitoris and minor labia, which were somewhat enlarged. Titillation of the clitoris would promptly bring about the muscular rigidity and other evidences of

enjoyment, as exhibited when the child herself was masturbating.

I advised the mother that the practice had probably been inaugurated by a colored nurse in order to secure quietude of the child. To break up the practice, the right hand was secured in a sling about the neck, and the thighs separated by means of a stick attached to either limb above the knee, to prevent approximation of the thighs. Added to this, the child was kept as much as possible in the arms of the mother when awake, Tonics were added to the treatment previously adopted.

At this writing (February, 1894,) the child is greatly improved in flesh and otherwise. The bowel trouble has totally subsided, and the disposition to masturbation very nearly eradicated.

Correspondence.

The "Discovery of Etherization" Once More.

Mr. Editor,—It is proper that I take some notice of the letter of Dr. W. R. Hayden, in your last issue, "reviewing" my late article (October, 1893,) on Dr. Long's discovery of anæsthesia; but I do not wish to exhume the "ether controversy," long since dead, or to create a new one. I am entirely content with having placed upon record some new and unanswerable history in connection with this great matter, and do not care to argue the question, at least until the merits of Dr. Long's claim are attacked by stronger adversaries than are now in sight. The statements made in that paper were based upon evidence as authentic and reliable as it is possible for human testimony to be, and they will take their proper place in historical medical literature, regardless of the reflections of Dr. Hayden.

Some of the particular "objections" which Dr. Hayden makes to the leading points of my paper I will pass over. Those objections, feeble enough when stated, grow beautifully weaker as the author proceeds to elaborate them. Their weakness will be their own answer.

Dr. Hayden speaks with a certain levity of the early experiments of Dr. Long. Those experiments were conducted in a scientific spirit, and Dr. Long made proper and legitimate deductions therefrom. From these experiments he reasoned out the probable advantage of ether in surgery, and they warranted him in making the test. That first operation was an experiment—necessarily so—and we are happy to say, a successful one. Dr. Long wished to establish by his experiments and early operations that the anæsthesia observed was entirely an ether effect, and not due to any individual idiosyncrasy or mesmeric influence, which latter was being much discussed at that time. This explains—what is so surprising to Dr. Hayden—why in the case of the amputation of the two fingers Dr. Long used ether for the first finger but removed the second without it. Before me is a letter from Dr. John F. Graves, of Cohutta, Ga., who, as a student, assisted at that operation. He tells me that the above explanation is entirely correct.

Dr. Hayden probably knows that nearly all medical and scientific progress has been the result of experimentation. To it we surely owe our present knowledge of physiology and therapeutics. I hope Dr. Hayden will pardon the suggestion, that possibly by this very method he himself hit upon the formula for the great and only *Hayden's Viburnum Compound* (said by advertisements to be second in importance only to the discovery of anæsthesia) at a time before he had found the ownership of a proprietary medicine more remunerative than the practice of physic.

The result of Dr. Hayden's various objections is that he discredits the evidence and does not believe the witnesses. There was never a more beautiful illustration of the old maxim, "the blindest persons are those who *will not see*." The evidence in Dr. Long's favor consists of the testimony of living persons, of the sworn statements of the four or five patients operated upon prior to 1846, and of the parties who witnessed said operations. No evidence can be stronger than this. I have had the pleasure of examining these certificates, and cannot doubt them. No honest and impar-

tial reader can doubt them. The following is a portion of a letter received only a few days ago from Dr. J. F. Graves:

"I entered the office of Dr. C. W. Long as a student of medicine in May, 1844. He soon informed me about his discovery, and described to me his manner of arriving at the conclusion that sulphuric ether possessed anæsthetic properties. He described to me also the cases in which he had operated with the use of ether, and he had proven to his own mind the perfect insensibility to be produced by the inhalation of ether. * * * * I was present and assisted him in using the ether in the case of amputation of the two fingers (January 8, 1845)."

Dr. Long's case has been thoroughly presented to the profession. If in the face of all the evidence that has been introduced to establish his claim to priority in the use of ether, there should remain any who should ask for further proof, then, indeed, human testimony, is worthless and there is "no faith, no trust, no honesty, in man."

In his desire to satisfy himself beyond all chance of mistake, Dr. Long's great opportunity was lost for the time, and a bitter controversy with a tragic sequel was the result. Dr. Long knew that the history of medicine had been marked by the rise and fall of "wonderful discoveries," prematurely announced. Sorry, as I now am, that he did not make his own announcement sooner, I am happy to know that it may always be said to his great credit and honor, that he did not first *patent* a common article under a new name, then rush rapidly into print with his first case, and then "post with such dexterity" to Congress for a reward in money.

Dr. Hayden states that "Dr. Morton's claims were allowed by many of the most eminent men of New England and the country," and he mentions the names of Webster, Choate, Sumner and others, but fails to say that they had to consider only the respective claims of Wells, Jackson and Morton, and that all but one or two of them were dead before the claim of Dr. Long had been gotten before the profession.

In spite of Dr. Hayden's surprise, I repeat the statement in my former paper, that Dr. Long's priority in the use of

ether as a surgical anæsthetic is beyond question—a fact which is being more and more recognized every day. On this point I have only to refer Dr. Hayden and other skeptics to recent literature on the history of the discovery of anæsthesia. This matter came up before the late meeting of the Pan-American Medical Congress in Washington. One of Dr. Long's warmest supporters was a gentleman from New England.* He said: "That sulphuric ether was repeatedly used as an anæsthetic by Dr. Long in his surgical practice as early as 1840 (should be 1842—L. B. G.) seems indisputable from the reliable evidence collected and published by the late Dr. Marion Sims a few years ago. The fact that Dr. Long did not publish it to the world does not affect the priority of its use."

It would give me a great deal of pleasure to show Dr. Hayden the comments which my own paper has received, both from the medical press and from individuals. Here is a postal, right from Boston: "I thank you very much for your paper, etc. * * * Too much credit has been given to the dashing empiric instead of to meritorious and modest investigation."

This letter is longer than I had intended. So I will only assure Dr. Hayden, in conclusion, that future writers will concede all that has been claimed for Dr. Long. Dr. Hayden himself may not see that day, but before the infant of his seventieth year shall have attained its majority, Dr. Long will be down in history as the original discoverer of anæsthesia by ether.

Thanking you for your courtesies, I am, with much respect, yours very truly,

L. B. GRANDY, M. D.

Atlanta, Ga., February 10th, 1894.

* Dr. Jacob L. Williams. *Boston Medical and Surgical Journal*, October 12, 1893.

*Proceedings of Societies, Boards, etc.***THE MEDICAL AND SURGICAL SOCIETY OF THE DISTRICT OF COLUMBIA.**

Meeting of December 11th, 1893.

Dr. I. S. Stone read a paper (page 1098) on

“The Importance of Early Diagnosis in Cancer of the Uterus.”

DISCUSSION—*Dr. Scott* said: The chief thing he would have to say in disagreement of Dr. Stone's paper was that it was impossible to diagnose cancer of the uterus by sight, nor was any reliance to be placed in reported cures after operation, unless the tissues had been found by microscopical examination to be infiltrated or composed of cancer cells. Unless the disease is very far advanced, it is impossible to diagnose it with certainty by sight alone. The cases where suspicion arises should be watched carefully, and he would urge the importance of the removal and examination of a small section of the cervix. Vaginal or abdominal hysterectomy is useless, if the case be far advanced and the lumbar glands are involved. In such a case a cure is impossible, and it is wrong to submit a woman to such a desperate operation when at best she can only live a few months. The time to operate is as soon as it has been demonstrated microscopically to be cancer, and early or not at all.

Mr. Moran believes in total extirpation in all cases favorable for radical treatment. Amputation of the cervix does not insure complete removal of the neoplasm, as it is not always possible to determine whether the body of the uterus may not be involved. When the growth has extended to the adjacent tissues, palliative treatment only is advisable. While frequent examination subsequent to childbirth is desirable, it is not practicable, nor is it wise or expedient to subject a woman to such examinations because of the untoward influence upon the mind.

Dr. Kerr said that there is no essential difference in the management of cancer of the uterus and cancer elsewhere. He considers the position of Dr. Stone well taken. In all cases of cancer cut wide of the disease. In cancer of the uterus, on account of the near connection of the neighboring organs, extirpation generally fails. Frequent examinations are desirable, but impossible. He believes that every one with a wart on the nose, or a fissure on the lip which

fails to yield to treatment, should be watched and the wart or the fissure carefully examined. His experience with cases of cancer of the uterus consisted of three total extirpations per vaginam and a number of scrapings, where the best results have followed thorough cleaning of the cancerous ulcer. In partial extirpation there is relief from the pain and an improvement in the odor and discharge. The younger Sims cleans out the ulcer and makes applications of zinc chloride. He believes in *early* extirpation; later in the course of the disease it is difficult to promise good results. The symptoms are not distinct, nor is the hæmorrhage characteristic. The only satisfactory examination is pathologically by means of the microscope.

Dr. Stone, in closing, said that he, of course, favors the microscope in making a diagnosis. The diagnosis is too often guess work. Statistics are not reliable. He advocates early operation; admits his early and frequent examinations are extreme views, but this position is forced upon him, as he had seen many cases where delay allowed great progress to be made in cancerous diseases. He referred to cases where heredity or good cause for suspicion existed.

Dr. James Kerr read a paper on

Amputation at the Hip-Joint.

DISCUSSION—*Dr. Scott* said that he had performed hip-joint amputations on the cadaver two or three times in Vienna, and assisted in a case in the Royal Infirmary, Edinburgh. The operation was performed by Dr. A. G. Miller, and Dr. Duncan caught the blood which was lost in a suitable vessel, defibrinated it, added normal salt solution to it, and injected it back through the femoral vein. This operation was a very bloody one, and if the venous injection had not been made the patient would probably have died from the effects of anæmia. The operation performed by Miller was exceedingly rapid, as rapidity was one of the essentials where the only means employed to check hæmorrhage was digital compression of the external iliac. Dr. Scott thought the method of Dr. Kerr beyond praise. It was a superior operation, and offered the best chances for success of any which had yet come to his notice.

We regret that lack of space compels omission of the Department of Analyses, Selections, etc., in this number.

Book Notices.

Text-Book of the Theory and Practice of Medicine by American Teachers. Edited by WILLIAM PEPPER, M. D., LL. D., Provost and Professor of Theory and Practice of Medicine and of Clinical Medicine, University of Pennsylvania. *In Two Volumes—Illustrated.* VOL. II. Philadelphia: W. B. Saunders. 1894. Royal 8vo. Pp. 1046—xii. Cloth, \$5; Leather, \$6; Russia Leather, \$7.50. (Sold by subscription only.)

The deferred appearance of this volume, mainly due to the busy life of the Editor, has permitted the introduction of much valuable data. After some "general considerations" by Dr. Wm. H. Welch, "concerning the biology of bacteria, infection and immunity," over 100 pages are taken up by Dr. Henry M. Lyman with the various diathetic diseases. Dr. Wm. Osler contributes a chapter on diseases of the blood, and another on diseases of the supra-renal capsules and ductless glands. Dr. Wm. Pepper's articles cover nearly 200 pages on diseases of the heart and blood-vessels, and over 200 pages on diseases of the alimentary canal. About 100 pages are devoted to diseases of the nose, larynx, bronchi, and pleura, by Dr. James C. Wilson. Dr. Francis Delafield claims about 100 pages on diseases of the lungs and kidneys, while Dr. James W. Holland gives about 30 pages to "practical urinary examination." About 100 pages are written by Dr. Reginald H. Fitz on diseases of the peritoneum, liver, and pancreas. Such is a synoptical statement of the contents of the last volume of this most recent authoritative and useful of works on the theory and practice of medicine that has been published. It is the text-book for the *practitioner and professor*; it is too voluminous for the College student. We intend no reflection upon the special merits of other articles in this book in remarking that the chapter by Dr. Holland, on "Practical Urinary Examination," is the best one article *for the practitioner* on that subject that we have ever seen. And the subject itself is so important to the every-day practitioner that had the work no other special value, this one article should be carefully read and kept within ready reach by the physician, surgeon and obstetrician. In closing this notice, we should also remark upon the excellent typography and handsome press-work of the publisher, who has spared no expense necessary to issue this most valuable text-book for the practitioner in fine style.

Operative Surgery. By TH. KOCHER, M. D., Professor at University, and Director of Surgical Clinic at Berne University. 8vo. 288 pages. 163 Illustrations. New York: Wm. Wood & Co. 1894. Extra muslin, price \$3.

The chief thing this book lacks, to make it the very one that practitioners want in such a work, is simply a good index to enable the owner to make ready reference to an item he knows is somewhere in its pages. The author describes—mostly aided with well-drawn wood cuts—only such methods of operation as he himself has tested. A practical point on which the success of the operator is based is the remembrance that the direction and depth of the first incision is generally more than half the battle; Dr. Kocher is always very explicit about these things. In short, this hand-book is almost invaluable to the surgeon who wishes to take in at a glance a graphic description of what he is about to do. We wish that there were many more such works *for the practitioner*.

Treatise on Headache and Neuralgia. Including Spinal Irritation, and a Disquisition on Normal and Morbid Sleep. By J. LEONARD CORNING, M. A., M. D., Consultant in Nervous Diseases to St. Francis Hospital, etc. *With an Appendix on Eye-Strain a Cause of Headache.* By DAVID WEBSTER, M. D., Professor of Ophthalmology in New York Polyclinic, etc. *Illustrated—Third Edition.* New York: E. B. Treat. 1894. Demi 8vo. Pages 275. Price, \$2.75. (From Publisher.)

As might have been predicted, the eminence of the two authors of this *Treatise* is sufficient to justify the demand made for this *third* edition. The necessity for this new edition has allowed opportunity to Dr. Corning to add the practically important chapter on the "Localization of the Action of Remedies upon the Brain," which shows research, observation, and careful consideration of the subject. Indeed, the whole of his work is marked by earnestness of investigation and the great desire to present facts useful to the practitioner. Dr. Webster, in the same manner, contributes the lessons of his vast experience and research in those conditions of eye-strain—excluding the inflammatory conditions of the eyes—upon which headaches are so dependent—namely, errors of refraction, impaired accommodation, and insufficiency of the extrinsic ocular muscles.

Outline of the Embryology of the Eye. With Illustrations from Original Pen-Drawings. By WARD A. HOLDEN, A. M., M. D., Assistant Surgeon N. Y. Ophthalmic and Aural Institute, etc. *The Cartwright Prize Essay for 1893.* G. P. Putnam's Sons, New York and London. 1893. 12mo. Pp. 69-12. Cloth, 75 cents. (For sale by West, Johnston & Co., Richmond.)

It seems that the author carried out his observations at the suggestion of Prof. Knapp, and the conclusions as to the process of development of the eye are based upon a great number of examinations of chick embryos obtained by incubation, on account of the difficulty in getting a complete series of human embryos. As to some points, pig embryos were used, as pig eyes closely resemble those of man. The twelve pages of illustrations are drawn by the author himself. Had it been possible to note the time of each development, it would have gratified the reader to know about what week of intra-uterine gestation such or such a stage of eye-development began or was ended. This essay is chiefly of interest to the histologist, and of course to the eye-specialist. It is written well, and the book is handsomely issued by the publishers.

Manual of Practical Hygiene. By W. M. L. COPLIN, M. D., Adjunct Professor of Hygiene, Demonstrator of Pathology, etc., Jefferson Medical College, etc., and D. BEVAN, M. D., Instructor in Hygiene and Clinical Microscopy, Jefferson Medical College, etc. *With an Introduction by H. A. HARE, M. D., Professor of Therapeutics, Materia Medica and Hygiene, Jefferson Medical College, etc. With 140 Illustrations, many of which are printed in colors.* Philadelphia: P. Blakiston, Son & Co. 1893. Cloth, 8vo.; pp. 456. \$4. (For sale by West, Johnston & Co., Richmond.)

Since the valuable work of Dr. Röhe, in 1890, we are not aware that any other distinctively American text-book on preventive medicine has been published. Now that colleges are introducing Chairs on Hygiene, and Boards of Health are being everywhere established, we are glad to see this disposition to make suitable American books to meet the demand. The subjects considered in this *Manual* are the causes of disease—including a statement of the microbic causes of disease and the method of detecting them,—their methods of ingress, and the available means for their prevention. Illustrations have been introduced wherever they would help the text. As public education increases, such a book as this should become popularized. It tells much that

the layman can easily appreciate, and more that the general scientific or professional man ought to know. All our architects, engineers, etc., should familiarize themselves with the principles involved in this most excellent work.

Treatise on the Medical Jurisprudence of Insanity. By EDWARD C. MANN, M. D., Author of "Manual of Psychological Medicine." Albany, N. Y.: Matthew Bender, Law-Book Publisher. 1893. Leather. 8vo. Pp. 920.

That this treatise is "up to date" is indicated by the fact that the psychological aspect of the case of Prendergast, who assassinated Mayor Harrison, of Chicago, last year, is considered in a chapter of five pages. But we look in vain for a synoptical statement of the laws of the various States relating to the medical side of insanity. Such a statement would have occupied more pages; but the need of such a synopsis is so great that we believe the legal and the medical professions alone would have quickly taken up the edition. The treatise is mostly taken up with medical facts. Dr. Mann is a close student of medical jurisprudence, and his work on any such subject bears all the weight of an authority. Many a time are doctors called in to define insanity. This treatise, if properly studied, would help a great deal.

Antiseptic Therapeutics. By Dr. E. TROUSSART, of Paris, France. Translated by Dr. E. P. Hurd. Vols. I. and II. 12mo. Paper. 316 pages. Twenty-five cents each volume. 1893. George S. Davis, Detroit, Mich., Publisher.

These two volumes of the "Physicians' Leisure Library" are well selected for professional needs, and are well translated. The work takes in nearly all of the most recently introduced agents supposed to have useful antiseptic virtues. Annual subscription of \$2.50 would secure the successive twelve numbers, and would be a small price for so much good reading.

Modern Climatic Treatment of Invalids with Pulmonary Consumption in Southern California. By P. C. REMONDINO, M. D., Member State Board of Health of California, etc. 1893. George S. Davis, Detroit, Mich. Demi 8vo. Pp. 126. Paper. Price, 25 cents.

This issue of the "Physician's Leisure Library" is one

full of interest to the general as well as the invalid reader. Its special object is, of course, as stated in the title. All sorts of entertaining information about California is given. Why pleasure or health seekers should prefer the foreign mountains or springs when such a vast treasure is here in America must arise simply from ignorance of America by Americans.

New Truths in Ophthalmology as Developed by G. C. SAV-AGE, M. D., Professor of Ophthalmology in Medical Departments of the University of Nashville and Vanderbilt University. 32 Illustrations. Published by the Author. Nashville, Tenn. 1893. Cloth. Small 8vo. Pp. 152. Cloth. Price, \$1.

To the specialist in eye work, this volume is intensely interesting. The "new truths," for which the author claims originality, are chiefly, 1. In cases of oblique astigmatism, the eyes are made to rotate by means of the harmonious symmetrical action of the oblique muscles. 2. Whether the causes of insufficiency of the oblique muscles be simple or complex, cures may be effected by the special method devised by the author of developing the obliques. 3. The law of projection, which is, that "every object seen must be on a line vertical to that part of the retina receiving the impress of light, regardless of the direction of the axial ray in the eye." 4. A very practical point the author brings out is the necessity for complete suspension of accommodation by mydriatics in the adjustment of glasses. In Part III, Dr. Savage describes five operations, which he claims to be his, either by device or modification, as follows: 1. Muscle shortening versus muscle advancement; 2. New operation for pterygium; 3. The simplest and best operation for the cure of entropion and trichiasis; 4. Artificial pupil through the centre of soft cataract; and, 5. to narrow the palpebral fissure. The book is well written, well illustrated, and well deserves careful examination or study.

Venereal Memoranda—A Manual for the Student and Practitioner. By PRINCE A. MORROW, A. M., M. D., Clinical Professor of Venereal Diseases, University of City of New York, etc. New York: William Wood & Co. 1894. 24mo. Pp. 332.

This is the revised or second edition, which brings the book fully up to date. Bacteriological amplifications have been made of the rôle played by micro-organisms in the production of syphilis and chancre, as well as of gonorr-

rhœa. Many valuable additions have also been made in the sections on therapeutics. This series of "Wood's Pocket Manuals" is very full—each of them serving in reality as monographs on the subjects. This *Manual*, indeed, contains memoranda that are sufficient to guide the practitioner through most of the difficult questions of venereal work. Its size is a great help to the student in reviewing for examinations, etc.

Exercise for Pulmonary Invalids. By CHARLES DENISON, A. M., M. D., Professor of Diseases of the Chest and of Climatology, University of Denver, etc. Published by Chain & Hardy, Denver, Col. 1893. Demi 8vo. Pp. 26. (Paper, 35 cents by mail).

This little book gives illustrations of the manometer and of the exercises to be practised by the invalid. It is really a useful and cheap book. It is the publication (in response to a resolution) of the paper read before the "Congress of Medico-Climatology of World's Fair Congress Auxiliary, June 1, 1893." The special value of this book is that the exercises can be practised by the invalid anywhere, and does not compel him to purchase a costly and cumbersome gymnasium outfit.

Practical Treatise on Diseases of the Hair and Scalp. By GEORGE THOMAS JACKSON, M. D., Professor of Dermatology, Woman's Medical College, N. Y. Infirmary, etc. *New, Revised, and Enlarged Edition.* New York: E. B. Treat. 1894. Demi 8vo. Pp. 414. Cloth, \$2.75.

This is in reality about the only complete scientific treatise of recent years in America on diseases of the hair and scalp. Being thus the pioneer, one may well imagine the vast amount of research necessary to issue a standard work on such subjects. This is indicated by the over forty pages of Biography, down to 1893, appended to the volume. As now presented, the book is divided into Part I—General Considerations; Part II—Essential Diseases of the Hair; and Part III—Diseases of the Hair Secondary to Diseases of the Skin. An examination of the table of contents shows that no subject that legitimately belongs to such a treatise has been overlooked. No specialist can well afford to be without this book, for it is by an eminent authority, and contains many items that cannot be found in any other one volume. The illustrations are good—nine new ones being introduced in this edition.

Hernia: Its Palliative and Radical Treatment in Adults. Children and Infants. By THOMAS H. MANLEY, A. M., M. D., Visiting Surgeon to Harlem Hospital, etc. Philadelphia: Medical Press Co., Limited. 1893. 8vo. Pp. 231-4.

This unpretentious monograph we regard as a valuable contribution to the subject of treatment of hernia, although the Index is simply horrible. The value of the contribution consists in the lesson which experience (in 58 cases of hernia operation) has taught, namely: Adopt no definite operation, but be guided by precisely the same principles as would direct an amputation,—totally disregard all specially designated operations, and in each case select such an one, with or without modification, as the conditions may require. He seems to prefer cocaine for anæsthesia of the parts. We do not note that the author introduces anything new, but simply insists upon exercising judgment rather than blindly adopt a special operation because designed by an eminent authority.

Annual of Eclectic Medicine and Surgery. *Record of 1893* Vol. IV. Edited by JOHN V. STEVENS, M. D., Professor of Diseases of Children and Clinical Medicine in Bennett Medical College, etc. Chicago. 8vo. Pp. 504.

Here is a book presumably to record the observation, investigation and experience of eclectic practitioners of America, which contains some good items of therapeutics, but loses its value as a scientific work in trying to argue its own cause. It is plain that medicine has not arrived at that stage of scientific development which justifies any body of men to lean back on the assertion, "The temple of the Lord are we!" Let the eclectic recognize that the broad principle of medicine is to "prove all things, and hold fast to that which is good." But how a body of sensible men can devote their lives to the abuse of calomel, of arsenic, etc., when thousands upon thousands of able practitioners are so well satisfied with them in suitable cases, we cannot imagine. The regular practitioner has the privilege of selecting his remedies from the whole realm of nature—only let him be satisfied of their value and suitability to the case in hand. But as to the book, outside of such matters as above referred to, Dr. Stevens deserves credit for careful editing and the selection of many really useful contributions relating to therapeutics.

Essentials of Minor Surgery, Bandaging, and Venereal Diseases. *Arranged in the Form of Questions and Answers.* By EDWARD MARTIN, A. M., M. D., Clinical Professor of Genito-Urinary Diseases, etc., University of Pennsylvania. *Second Edition, Revised and Enlarged.* 78 Illustrations. Philadelphia: W. B. Saunders. 1893. Cloth. 12mo. Pp. 166. \$1.00, by mail.

"Saunders' Question Compends" are all well prepared for the purposes intended, and, of course, are very popular with students. They are not intended to take the place of text-books, but, as guide-books in the class-room, they are valuable aids. The Compend on Minor Surgery, etc., has been thoroughly revised, and has many new cuts to illustrate the text. It is a good book of the kind.

How to Use the Forceps, with an Introductory Account of the Female Pelvis and of the Mechanism of Delivery. By HENRY G. LANDIS, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children in Starling Medical College, etc. *Revised and Enlarged by* CHARLES H. BUSHONG, M. D., Assistant Gynecologist and Pathologist to Demilt Dispensary, etc. *Illustrated.* New York: E. B. Treat. 1894. Demi 8vo. Pp. 202. Cloth, \$1.75.

We are afraid that, in this day, when object teaching is so much demanded, the editor and publisher made a mistake in not introducing fuller illustrations. Pictures show in a moment what words without illustrations cannot well describe in many pages. We have often been afraid that an immense amount of technicality and of routine description has made difficult to the beginner that which is essentially simple—with a knowledge of pelvic and foetal head (or buttocks), anatomy, physiology, some elements of physics and of mechanics, and familiarity with the instruments to be used. The great popularity of such a paper as the *Scientific American* is the profusion of its drawings in describing a mechanism and its uses. Even the untutored catch the idea, and work out useful results by such drawings. We hope future editions will be more plentifully illustrated.

Treatment of the Diseases of the Stomach and Intestines. By A. MATHIEU, Physician to the Paris Hospitals. New York: William Wood & Co. 1894. Demi 8vo. Pp. 285. Parchment muslin, \$2.50; flexible leather, gilt top, \$3 25.

According to advertisement, this is Volume II of the "Medical Practitioners' Library," recently begun by the

well-known publishers. The book under notice has been appropriately selected because of its bearing upon subjects so constantly under the care of practitioners, and regarding which every doctor wishes to secure the best of the latest remedies. The author herein presents a most excellent and valuable work—teaching lessons of observation and experience with the grace of one familiar with his topics. And yet he points out that much is yet to be learned, especially about intestinal digestion. The opening chapter is one of special value to every practitioner, in that it treats of the “diagnostic technique,” in which are described the different methods employed for the examination of the contents of the stomach, of the fæces, of the urine, etc., with special reference to the diagnosis of the dyspeptic conditions. The chapter on “General Considerations on Diet” is also very valuable. This book will help practitioners in their obstinate or difficult cases.

The Strike at Shanes. *Sequel to Black Beauty. Prize Story of Indiana.* American Humane Education Society, Geo. T. Angell, President, 19 Milk Street, Boston, Mass. Paper. 12mo. Pp. 91. Price, 10 cents.

This “Prize Story of Indiana” was written for, revised, copyrighted, and published by the American Humane Education Society. It is intended to show the effect and the nonsense of most of the strikes instituted by irresponsible people without a cause that commends itself. This story accords sufficient intelligence to the lower animals to employ like methods in righting their wrongs. It shows the results that would naturally follow if the support and assistance given us by the lower animals and birds should be withdrawn, as would be the case if they should exercise the same rights claimed by human toilers, and go on a strike.

Nil Desperandum. 8vo. Pp. 155. Paper. 25 cents. By Geo. T. Angell, President of the American Humane Education Society, etc. 19 Milk St., Boston.

This is a collection of autobiographical sketches and personal recollections by Mr. Angell, who in youth adopted the motto “nil desperandum.” It is interesting to scan such diaries, and oftentimes, to youths who aspire to position, it is well to repeat the motto, *nil desperandum*.

Editorial.

University College of Medicine, Richmond, Va.,

Is the name by which the "College of Physicians and Surgeons, Richmond, Va.," is hereafter to be known. The change of name was granted last month by the Circuit Court of Richmond (Judge Beverley R. Wellford)—the same court that gave the original charter. That charter granted University features, and departments of Medicine, Dentistry and Pharmacy were organized with distinctive Faculties. This University feature was not expressed in the former title, which fact necessitated a vast amount of correspondence. We do not know that there is any other one institution in the South that confers the respective titles of M. D., D. D. S., and Ph. G. upon graduates in respective departments. It is, therefore, to be remembered that the title, "*University College of Medicine, Richmond, Va.,*" is simply the changed name of the "College of Physicians and Surgeons" of this city, and that it does not imply any newly-made or contemplated connection with any other University or College. We know of no other institution in the United States that has the title of "University College of Medicine," except the one in Richmond, Va. It is hoped, therefore, that the new name is sufficiently distinctive to prevent confusion.

Revision of Act to Regulate the Practice of Medicine and Surgery in the State of Virginia.

In our February number, pages 1051-5, inclusive, will be found the full text of the Act of the General Assembly of Virginia on this subject as approved by Governor O'Ferrall about February 1st. Soon after its publication as a law, a legal defect was thought, by some eminent constitutional lawyers, to exist in the second paragraph of section 1, in that the law was retro-active. Hence the friends of the bill in the Legislature at once had the Act recalled and added a clause which in effect provides that nothing in the Act shall apply to any one now legally licensed and practicing in this State. The original act as thus amended was then re-enacted and signed by the Governor and is now the law, which the best of lawyers say will now stand any legal test.

If there are errors in the law as it now stands in the Statutes of Virginia, it is due to the friends of the measure

to say that they thought they were carrying out the wishes of the legalized profession of the State. It is plain that the Legislature of Virginia wished to express its disapproval of the permission granted by certain courts to itinerant quacks and charlatans to practice in this State without first undergoing the examination required of its citizens. The only way to reach such cases was to make a law—not retro-active, because unconstitutional—that applied to those not licensed at the moment the Act was signed.

If the re-enactment with amendment had not been “rushed” through the Legislature, time would have been given outside quacks and charlatons to come into the State and secure licenses without passing examination before the Board of Examiners. Whether there are any qualified doctors in the State who come under the discipline of the present law we do not know. This fact can be found out by each doctor for himself by seeing whether or not his license to practice in *Virginia* was in effect February 24th, 1894. If not then in effect, he has to secure permit from the Medical Examining Board of Virginia in order to become a lawful practitioner. We sincerely trust that no qualified practitioner was caught without his license to practice, for we see no possible way for him to escape the provisions of the law until changed.

Let all interested read the Announcement of the Medical Examining Board of Virginia relating to the time and place of the Spring Examinations, beginning *punctually* at 9 A. M. Wednesday, April 18th, in the Capitol building, Richmond, Va. The Board itself will meet at 8 P. M., Tuesday, April 17th, in the same building to formulate its plans.

The Medical and Surgical Reporter, Philadelphia, Pa.,

Is an old favorite standard that is now issued in handsome style at \$3 a year. Its advertisement faces the first reading page of this number. To new subscribers to both the *Medical and Surgical Reporter* and the *Virginia Medical Monthly* we will send the two journals one year for five dollars. To new subscribers for either we will send both for \$5.50. Now is the time to begin. Read the advertisement of the *Medical and Surgical Reporter* in this issue.

The Atlanta Polyclinic,

We are sorry to learn as we go to press, has disbanded. It seems to us that Atlanta would be a good centre for such an institution.

The Summer School of Medicine of the University College of Medicine, Richmond, Va.,

Has a four page announcement in this issue which unfortunately was printed in advance of the change of name from "College of Physicians and Surgeons." In that advertisement, we must ask readers to change the latter name wherever it occurs to that of the University College of Medicine. Another important change is to substitute \$50 in place of \$75 wherever the cost of the entire course of lectures, etc., is referred to; but the cost of each ticket when taken alone is as stated in the advertisement. It should be remembered that this Summer School is altogether independent of any other Faculty of Medicine, except that the Summer School rents the use of the buildings, dispensary, clinical amphitheatre, etc., of the University College of Medicine, Richmond, Va., *formerly the College of Physicians and Surgeons*. We hope it great success. Write to the Secretary, Dr. M. D. Hoge, Jr., for further information.

Dr. J. F. Winn

Has resigned as Professor of Diseases of the Nervous System, and as Corresponding Secretary of the University College of Medicine, Richmond, Va., to accept the position of Clinical Professor and Demonstrator of Obstetrics for which his inclinations, his practice, and most of his special studies so well qualify him. He has also tendered his resignation as Medical Superintendent of the Virginia Hospital, who had to reside in that building, and has engaged offices, etc., at 109 West Grace Street, Richmond, Va.

Medical Sentinel, Portland, Oregon,

Is the changed name of the *Pacific Medical Record*, edited ably by Dr. Henry W. Coe. That it is a good journal is shown by the fact that it has been officially endorsed by the five State Medical Societies of Montana, Washington, North Dakota, Oregon, and Idaho. Eastern editors lose a great deal by not taking some of the excellent Western journals. Why not take this one?

Mathews Medical Quarterly, Louisville, Ky.,

Is the title of the best journal we have ever seen devoted mainly to diseases and surgery of the rectum, etc. Price, \$2 a year. About 500 pages a year. Dr. Jos. M. Mathews, of Louisville, author of that most excellent *Treatise on Diseases of the Rectum, Anus, and Sigmoid Flexure*, is editor.

Dr. J. Allison Hodges,

Who has established for himself an enviable reputation as Professor of Anatomy in the University College of Medicine, Richmond, Va. (formerly College of Physicians and Surgeons), has been elected also Professor of Diseases of the Nervous System in the said University—Dr. J. F. Winn resigned. Dr. Hodges has also been elected Corresponding Secretary of the same institution, which position Dr. Winn has resigned. Dr. Hodges will scarcely enter actively upon his new Professorial duties until next Fall; but as Corresponding Secretary, he will be installed at once.

Officers of the Medical Society of the District of Columbia.

At a meeting of the Medical Society of the District of Columbia, held on January 1st, the following officers were elected for the ensuing year: *President*, Dr. Sam'l C. Busey; *Vice-Presidents*, Drs. Robert Reyburn and J. T. Johnson; *Secretary*, Dr. S. S. Adams; *Corresponding Secretary*, Dr. Thomas C. Smith; *Treasurer*, Dr. C. W. Franzoni; *Librarian*, Dr. E. L. Morgan; *Board of Examiners*, Drs. G. N. Acker, W. S. Bowen, S. S. Adams, C. H. A. Kleinschmidt, and G. C. Ober; *Board of Censors*, Drs. C. W. Richardson, E. F. King, and J. T. Winter.

Dr. Wilfred M. Barton

Has been appointed Assistant Resident Physician at Columbia Hospital, Washington, D. C. Dr. Barton is well-qualified for the position, having just completed a term of service as Interne at the U. S. M. Hospital, Chicago, Ill. He will be remembered by our readers as the author of "A Contribution to the Study of the Parietal Foramen," which appeared in the *Monthly* a short time ago.

Dr. Chas. G. Cannaday, of Roanoke, Va.

Has gone to Rome, Italy, to attend the International Medical Congress to be held there this month. During his absence, the "Rebekah Sanitarium" in Roanoke will be closed. Among other places, he will visit the Southern portion of France, and will also visit Vienna, and be in Prof. Billroth's Clinic. We are promised a journal letter from Dr. Cannaday during his absence which will probably be extended to about the first of May.

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In the *Index of Subjects*, the alphabetically-arranged italicized lines call attention to titles which represent original articles in this Volume.

Notices of books, colleges, journals, deaths, personals, and proceedings of societies, etc., are indexed in the **Index of Subjects** under the respective words, **Book Notices**, **Colleges**, **Journalistic**, **Obituaries**, **Personals**, and **Society and Board Proceedings**, etc.

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